

# Railway Age

Vol. 80

March 6, 1926

No. 10



Train No. 27, N. Y., N. H. & H., on the Canton Viaduct

## Contents

- McClellon Water Tube Boiler Tests.....** **Page 575**

New Haven tests with locomotive carrying 250 lb. steam pressure show increased economy and capacity—More locomotives with this boiler under order.

- Can Brotherhoods and Managements Work Together?.....** **581**

L. E. Keller, statistician, Brotherhood of Maintenance of Way Employees, tells of his organization's offer of co-operation and how it can work to mutual advantage of railroad and employee.

- Nickel Plate Application Denied.....** **585**

Commission approves of plan from transportation standpoint but dislikes financial aspect of Van Sweringen proposal.

### EDITORIALS

Bus and Truck Exhibit at Atlantic City .....	569
Look Now to the Future .....	569
Improving Conditions on Canada's Government-Owned Lines .....	569
Purchased and Generated Power .....	570
Three Important Operating Records .....	570
Conducting Foremanship Training Classes .....	570
The Nickel Plate Decision No Bar to Others .....	571
Co-operation Between Railways and Labor Unions .....	571

### NEW BOOKS .....

#### LETTERS TO THE EDITOR

The Store Department Can Help .....	573
Railway Purchases and Traffic .....	573
Locating the Rails with Transverse Fissures .....	573
Captain Beyer and Company Unions .....	573
A Friend of the Day Coach Speaks .....	574

### GENERAL ARTICLES

McClellon Water-Tube Boiler Tests .....	575
Freight Car Loading .....	580
Stabilization of Employment on the D. & H. ....	580
Can Brotherhoods and Managements Work Together! by L. E. Keller .....	581
Labor Bill Passed by House .....	583
Nickel Plate Application Denied .....	585
F. R. R. to Build Eight Electric Locomotives .....	591
Plan for Rock Island-Frisco Unification Deferred .....	592
Illinois Central Installs G. R. S. Electric Car Retarders .....	593
Texas Senator Wants States to Authorize New Lines .....	596
Coast Line to Acquire A. B. & A. ....	597
Purchasing Paint Economically, by J. J. Callahan .....	599
Little Railway Legislation Now Expected .....	600

### GENERAL NEWS DEPARTMENT .....

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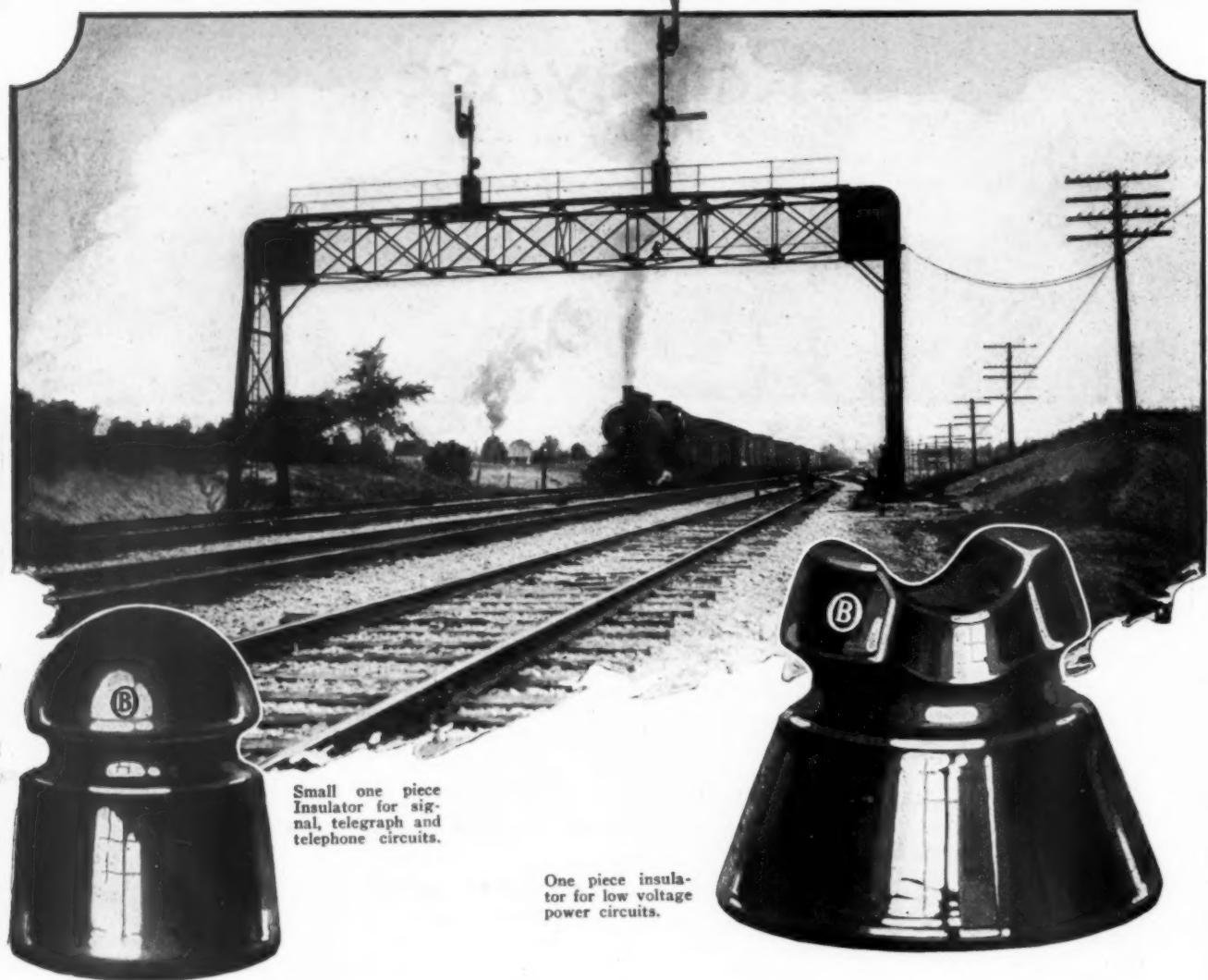
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# Railway Age

Vol. 80, No. 10

March 6, 1926

Table of Contents Appears on  
Page 5 of Advertising Section

## Bus and Truck Exhibit at Atlantic City

THE Railway Supply Manufacturers' Association has rendered the railways a real service in making provisions for the accommodation of manufacturers of motor buses and trucks at its exhibit in connection with the convention of the Mechanical Division of the A. R. A. at Atlantic City in June, as reported in the news section of the *Railway Age* last week. As a result of this many railway officers who are lately manifesting a keener and more personal interest in highway vehicles will have for the first time an opportunity to secure a comprehensive impression of what the motor vehicle manufacturers have to offer them. There is no doubt that the exhibits of the manufacturers of buses and trucks will be a revelation, and an important and timely one, to a great many railway visitors to the convention. Incidentally, the provision of exhibit space for the bus and truck companies was not easily arranged. Only the determination of the officers of the R. S. M. A. to find a place for the motor people, with the hearty co-operation of the city administration of Atlantic City, made the solution of the problem possible. With more space than ever before claimed by the railway supply exhibitors at previous conventions, the task of finding an additional large area of space convenient to the convention hall and the other exhibitors, was an imposing one. The space which was finally made available, on account of its highly convenient location, constitutes a happy solution of the problem. The response of the bus and truck manufacturers to this tangible evidence of a hearty invitation to "Come in!" will not be less hearty. Several bus and truck companies have already made formal request for large areas of exhibit space. Others will lose no time in following suit. There is no expectation that even a single foot of floor will go begging. The officers of the R. S. M. A. are to be congratulated on their desire to have the bus and truck manufacturers participate in their exhibit. They have made possible an exhibition of modern railway tools, figuratively speaking, which would have been less complete if buses and trucks had been missing.

## Look Now to the Future

THE last two years have witnessed the handling of record freight traffic by the railroads of this country and at the same time the existence of a surplus of cars. Recent reports of car orders filled and of car surpluses and shortages indicate that the railroads are, to a great extent, caught up with their work. These conditions have been brought about by improved operating methods which involved greater car utilization. During the past few years the tendency on many roads has been toward the making up of solid, tonnage trains which can be handled from point of origin to destination without the necessity of breaking up and reclassifying at intermediate yards. Improved methods in car repair work and in terminal inspection have resulted in minimizing the necessity for set-

ting out "bad order" cars and in a reduction in train delays. Modern car repair methods have demonstrated the possibility of turning a car over to the transportation department much sooner and in relatively better condition than was the case not so many years ago and present-day terminal inspection methods have done much to assure that the cars finally made up into trains are in condition to run through to destination. Right now, while the pressure of demand for cars is relatively light because of an existing surplus, is the time for car department officers to look to the future with a view to making changes in facilities which will further improve car repair and inspection methods. May the suggestion also be offered that when requests for new car department equipment reach the executive officer the decision made should take into consideration the fact that modern operating methods can succeed only in proportion to the success of maintenance of equipment methods.

## Improving Conditions on Canada's Government-Owned Lines

THE final figures for the operations of the Canadian National in 1925 show net earnings of \$32,264,414—almost double the 1924 figure and \$12,000,000 ahead of 1923, the best previous year since the consolidation of the various properties under one management. Obviously the most vexing Canadian railroad problem is moving in the direction of a solution. But it still has a long way to go—just how far depending on the point of view as to what are and what are not legitimate fixed charges against the property. Charged against the road is a vast debt, the greater part of which is in the hands of the government. And of the debt in the hands of the government a great part represents advance, and interest on them, made to cover past deficits. These charges against the railroad, with accumulated interest, pile up each year, making constantly more difficult the attainment of financial equilibrium. Perhaps the advances to cover deficits and interest thereon are legitimate railway charges. However, it is perfectly evident that a private corporation faced with them would have been forced into bankruptcy long ago. And bankruptcy would certainly free a private corporation from a large part of the obligations of such an impossible character. The political situation in Canada at the present time is chaotic and little public business is being transacted by the Parliament now sitting. When the situation is clarified, however, it will be interesting to see what solution of this problem is proposed. A frank facing of the facts, with a consequent writing down of C. N. R. obligations to a more reasonable figure would give the management a definite goal to aim at. Governmental experiments in railroading have cost Canada many, many millions, but no good end is served by leaving a large part of this expense as a charge against the railways, rather than frankly shouldering it as a government burden—a price paid for

developing the country. Unburdened of such charges and with a fixed goal to aim at the C. N. R., with its increasing efficiency and improving business conditions in Canada, might before long begin to turn money into the public treasury.

### Purchased and Generated Power

**T**HROUGH a period of years there has been a tendency for railroads to purchase more electric power and generate less. Whether power is to be purchased or generated is entirely an economic question. In locations where the electric demand is relatively high and the steam demand small, it is usually more economical to purchase power than to generate it. Recent developments in extraction or bleeder type turbines have, however, somewhat changed the situation. These are now available in a variety of forms with different kinds of regulating apparatus and it is possible to extract steam at pressures varying from 1 to 200 lb. The result of this development is that there has recently been a considerable increase in the sale of small turbines in the industrial field; this in spite of the fact that large turbines can be used to develop electric power more economically. Unlike many industrial plants the railroads do not have occasion to use "process" steam, but they do use steam for blowing-up engines and for various kinds of heating. Steam for these purposes is frequently supplied entirely or in part through a reducing valve. By using a steam turbine in the place of a reducing valve a quantity of electrical energy can be developed with relatively little loss in the value of the steam for other purposes. Extracting steam from several stages of a turbine introduces an involved problem in thermodynamics, but the data are available for the asking and when there is need for building a new power house or for getting more out of one that is overtaxed, it is possible that the extraction type turbine can be used profitably.

### Three Important Operating Records

**M**UCH has already been said about the many new records for increased operating efficiency made by the railways in the year 1925, but some of the best records of this kind, as shown by the final operating statistics for the year just issued by the Interstate Commerce Commission, were in the three important factors of freight train loading, freight train speed and freight car mileage per day. In all three of these factors, as well as in others, all previous records were exceeded and in the number of tons of freight per train the record shows an unbroken progressive increase for five years. The average net tons per freight train in 1925 was 744, as compared with 715 tons in 1924, 713 tons in 1923, 676 tons in 1922, and 651 tons in 1921. This performance was especially noteworthy in the face of the inability of the railways to bring about an increase in the loading per car, which is affected by changes in the character of the traffic and also by the fact that it is more difficult to get shippers to load cars heavily when they are plentiful, as they have been recently, than it was in the old days when car shortages were not unknown. The net tons per train showed an almost consistent increase during each month in 1925, reaching a peak of nearly 800 tons in August, and the monthly average was at all times higher than during the preceding five years. The increased speed of freight trains, in spite of the greater tonnage per train, is shown by the average miles per hour of trains in freight service, which was 11.8 in 1925, as compared with 11.5 in 1924,

10.9 in 1923, 11.1 in 1922, and 11.5 in 1921. In the western district the average for 1925 was 12.4 miles, as compared with 12.1 miles the year before. The average mileage per car per day, which reflects the comparative absence of delays in handling at terminals or elsewhere, rather than the speed with which they are run, reached the high figure of 28.3 in 1925, as compared with 26.8 in 1924, 27.8 in 1923, 23.5 in 1922, and 22.4 in 1921. The average net tons per loaded car, on the other hand, was 27 for 1925 and 1924, as compared with 27.9 in 1923, 26.9 in 1922, and 27.6 in 1921.

## Conducting Foremanship Training Classes

**A** NUMBER of foremen's or supervisors' clubs have been started on the railroads this season and a considerable number of officers and foremen have undertaken a study of foremanship or leadership, either in groups or classes, or as individuals. One great difficulty in conducting classes or open forum discussions has been to find the right sort of leaders. While men may have the personality required for leading a discussion, very few of them have had any special training in this respect, particularly so far as foremanship is concerned. Fortunately this need has been quite generally recognized by those who have been studying to develop better leadership in industry and transportation, and last summer several conferences were held in different parts of the country at which the attempt was made to provide an intensive training to fit men to lead discussion groups.

One illustration of splendid practical results obtained from this intensive training may be found in the foremen's club at Albany, N. Y. This includes in its membership officers and foremen from the Delaware & Hudson, the New York Central and a number of the local industries, the meetings being held either in the Central Building of the Y. M. C. A. or at the plants of some of the industries. A typical program would include a simple supper, some music, an address by an authority or expert from the outside, and then an open forum discussion. At the last meeting this discussion was led by one of the men who took an intensive course under the direction of the Industrial Department of the Y. M. C. A. at Silver Bay last August. It extended over a week and was intended to prepare leaders for discussion groups on foremanship.

The leader of the group at Albany at the last meeting, asked the group to outline the duties and responsibilities of a successful foreman. He carefully refrained from answering questions or giving opinions, but insisted that the group make the suggestions and carry on the discussion. He was aided by one of the men, who noted down the high points on the blackboard. The first five or ten minutes of the discussion were a little bit slow, because of the hesitancy of the members in taking part. Under skilful direction, however, the ice was soon thoroughly broken and a lively discussion ensued, which it was difficult to stop off after an hour and a half, although it was then well after 10 o'clock.

Doubtless some of the railroads on which supervisors' classes or clubs have been started during the past year, have had difficulties, and the study and discussion groups may not have been as successful as had been anticipated. If this is true, would it not be well to look into this new development of intensive training of conference leaders, to see whether some of the officers or foremen might not be able to take advantage of such courses during the coming summer?

## The Nickel Plate Decision No Bar to Others

**W**HILE much comment was printed in Wednesday's newspapers to the effect that the Interstate Commerce Commission's denial of the Nickel Plate application was a great blow to progress toward railway consolidation, it would appear that most of such comment was based on the mere "flash" that the commission had decided adversely to the plans of the Van Sweringen brothers, before the decision had been read. There is nothing in the decision to indicate that the commission's disapproval would extend to other plans for unification such as have been discussed. In fact it is almost an invitation for a renewal on different terms of the application for this particular combination of roads, which the majority decision says is in the public interest, although several of the majority do not agree with that statement in their separate concurring opinions. The report shows that the commission is not averse to approving a combination of this extent under paragraph 2 of section 5 and that it was not at all influenced by the fact that the plan proposed was not in accordance with the tentative consolidation plan promulgated by the commission in 1921, which it says is not to be regarded as an inflexible guide.

The commissioners find fundamental objections to many features of the financial plan by which the Van Sweringens had obtained or sought to perpetuate control over the roads involved, but it does not base its denial on any particular one of them and it is most unlikely that the average plan for a unification of any considerable group of railroads would contain many of the points which the commission objects to. The decision is perhaps a notice to other railroads that a simple financial plan is far more likely to "get by" a majority of the eleven commissioners than one which involves such a pyramiding of credit as this one, and that the so-called "administration policy" in favor of railroad consolidations is not so strong as to influence an independent body like the commission to approve a plan it does not like. In its recent statement before the Senate committee the commission indicated that it was not in favor of rushing the country "headlong into any gigantic plan of consolidation." In other words consolidations are not to be made too easy. While the opinion has been expressed that the amount of attention devoted by the commission in this case to the objections of minority stockholders would indicate that it would require nearly unanimous agreement of the stockholders on terms, the report does not show that the commission was necessarily more influenced by the objections of the minority than by some of the facts as to other features of the transaction that they caused to be brought to its attention.

In one respect the decision may have a beneficial effect in influencing the possibility of getting through Congress the changes in existing legislation which are necessary to pave the way for many consolidations which would doubtless be approved by the commission. It will tend to remove some of the suspicion which has been growing in Congress, ever since the commission found it necessary to make a large increase in freight rates, that the commission is more inclined to favor the "railroad interests" than the "people."

The fact that this suspicion is held by the less-informed members of Congress does not reduce the number of their votes, and the fact that the commission has turned down a big merger proposal ought to tend to reduce their apprehension against allowing the commission a wide discretion in such matters.

## Co-operation Between Railways and Unions

**W**E publish elsewhere an article by L. E. Keller, statistician of the Brotherhood of Maintenance of Way Employees, advocating a program of co-operation between the railroads and the officers and members of this organization. As the article shows, a resolution endorsing such a program was adopted at the last convention of this brotherhood. The way in which the program and Mr. Keller's argument in support of it will be received by the managements of different railways probably will depend largely upon their attitude toward labor unionism in general.

We publish the article because we believe the columns of this paper should be a forum for the discussion of all important questions of railway policy and practice. The proposition made by the Brotherhood of Maintenance of Way Employees is, however, of such a character as to illustrate one very important difference between industrial conditions in the United States and some other countries in which both industrial and political conditions usually are assumed to be somewhat similar to ours.

Great Britain is essentially an industrial country. Its government, although in form a monarchy, is actually a democracy. In that country the labor unions come so near to including all workingmen that every branch of industry has to deal with them. The British labor unions advocate radical programs and constantly use their power to limit output and to put both economic and political pressure upon the nation for the promotion of socialistic purposes. There is little or no disposition manifested to co-operate with employers to increase efficiency of production.

General economic conditions, to whatever causes they may be due, are much worse than in the United States and the income of the average worker much smaller.

Great Britain is an old, densely populated country and Australia a very new, thinly populated one, and in most respects conditions in the two countries are widely dissimilar. They are similar, however, in the respect that in Australia the labor unions include practically all working men; that they favor highly socialistic policies, and that they use the most extreme forms of economic and political pressure to further their purposes in dealing with both employers and the public. In Australia population and production have increased, and are increasing, only very slowly; the average income of the workingman is much less than in the United States; and to the power and economic and political methods of the labor unions the failure of population and production to increase as they have and do in the United States, is mainly attributed by many intelligent observers.

In the United States labor is much more conservative in its economic and political principles and methods than in any other highly industrialized country. It is a well-known fact that a relatively smaller part of working men belong to labor unions in this country. Our labor union leaders generally are less disposed than those of other countries to favor limitation of output as a means of increasing employment. On the contrary, there has been evident within recent years a tendency on the part of the more intelligent and thoughtful labor leaders to accept the principle that labor should co-operate through its unions in increasing output because the larger the production the larger will be the share of it that labor receives in wages. Management in the United States has a freer hand than in almost any other industrial country

and uses it more energetically to introduce new methods and machinery that increase production.

To whatever extent it may be due to these conditions, it is an undeniable fact that the average income of the American workingman is much larger in proportion to the cost of living than that of the average working man in any other country in the world, whether an old country, such as those of Europe, or a new country such as Australia.

When the American employer has presented to him the question of accepting or rejecting a program of co-operation involving full recognition of a labor union, such as that which has been submitted by the Brotherhood of Maintenance of Way Employees to railway managers, the question inevitably arises in his mind to whether labor, economic and political conditions in this and other industrial countries argue for or against voluntary acceptance by the employer of co-operation with labor unions. As to the desirability of co-operation with the employees of his own particular concern there can be little question in the mind of any intelligent employer. He must have that if he is to have efficient operation. He must at the same time, however, recognize the fact that if he deals with the union he will strengthen it and that after he has thus strengthened it, if it uses its increased power to impose or try to impose excessive wages or unreasonable working conditions the result will be to reduce the efficiency of operation and production. He must also recognize the fact that such proposals from unions have the purpose—and it is right they should have—of ultimately increasing the wages and improving the working conditions of labor.

Every sound form of co-operation between an employer and his employees, whether the latter be represented by union leaders or not, would result in increased efficiency. Otherwise it would not be sound. The benefits of this increased efficiency should be shared in increased wages to the employees, increased net earnings to the employer and reduced prices or rates to the general public that buys what they produce. This is especially true of programs of co-operation between railway managements and their employees.

The railway companies being subject to regulation, the railway manager must in every policy he adopts consider the rights and interests of the public, of railway security owners and of employees. Labor union leaders are sometimes disposed to become cynical when railway managers, in dealing with them, talk about the necessity of considering public opinion and protecting the rights and interests of the public. There is no good reason for their cynicism. Every railway manager has learned, from long, hard experience with public sentiment and public regulation, that he must consider the rights and interests of the public, because if he does not do so voluntarily public sentiment and government regulation will force him to, and in the process of forcing him probably will inflict injuries upon the railway which might have been avoided by voluntarily giving to the public all to which it is entitled.

It is due mainly to the superior efficiency of American business management and American labor that the average income of every class of the American people, including workingmen, is greater than the average incomes of corresponding classes of people in any other country. The true test of the desirability and value of every plan of co-operation between an employer and employees, whether the latter be organized in unions or not, is whether its purpose and effect, will be first, to increase efficiency in production, and, secondly, to divide the benefits of this increased efficiency between the employer, the employees and the general public. We believe these principles are

becoming more and more widely recognized by business men and workingmen and that therein lies the hope of this country for increasing peace in industry, and for more efficient production and increasing incomes for all classes.

## Books and Articles of Special Interest to Railroaders

(Compiled by Elisabeth Cullen, Reference Librarian, Bureau of Railway Economics, Washington, D. C.)

### Books and Pamphlets

*The Alaska Railroad.* Report covering period from July 1, 1924 to June 30, 1925, on construction, operation, personnel, mining activities, etc. U. S. Cong., 69th, 1st sess. House Doc. no. 255. 48 p. Pub. by Govt. Print. Off., Washington, D. C.

*Development of the Locomotive.* A handsomely illustrated volume showing historic locomotives, "firsts" of a type, etc., with foreword by J. Snowden Bell. Begins with Cugnot's locomotive of 1769, the latest type shown being the Lima 2-8-4. 64 p. Pub. by Central Steel Company, Massillon, Ohio.

*Merrill's Catechism on Safety Appliances,* by T. D. Merrill. Questions and answers on safety appliances with suggestions for electric locomotives and motor cars used in railway service. 75 p. Pub. by Author, Minneapolis, Minn. \$1.00.

*Transportation Economics of the Great Lakes-St. Lawrence Ship Channel,* by Alfred H. Ritter. Practicability of waterway, cost of operating ocean vessels to lake ports, rates, traffic available, and other factors discussed. 276 p. Pub. by Great Lakes-St. Lawrence Tidewater Asso., Washington, D. C. \$1.50.

### Periodical Articles

*Big Business Searches the Infinitesimal,* by Arthur Pound. Practical aspects and applications of research into pure science by General Electric Co. Atlantic Monthly, March, 1926, p. 370-377.

*The Chinese Railway System as an Instrument of Disruption,* by Putnam Weale. International and other complications affecting Chinese railways, and their use in various war operations. American Review of Reviews, March 1926, p. 536-544.

*Electric Transmission for Internal-Combustion Engines,* by Hermann Lemp. Application of automatic speed-torque control to rail cars, p. 209-212; automatic speed-torque control gas- and oil-electric switching locomotives, p. 212-213. Illustrated. Mechanical Engineering, March, 1926, p. 205-217.

*Lawrence of the Hejaz,* by Edmund Candler. Interesting both as a sketch of what it is possible to do to and with a railway in war-time and an interpretation of an unusual personality. Atlantic Monthly, March 1926, p. 289-304.

*Railway Safety Doubled in Ten Years.* Achievements from 1914-1924. Literary Digest, February 20, 1926, p. 25.

*The Stagecoach—With Modern Improvements—"Land Cruising" About America.* Two comments on advantages and disadvantages of passenger transport by motor vehicle and railway trains, and on a new type of special train tours. American Review of Reviews, March 1926, p. 466-467.

## Letters to the Editor

### The Store Department Can Help

SUPERIOR, Wis.

## TO THE EDITOR:

I was much impressed with the article in the *Railway Age* of February 20, on the subject of boiler pitting. This article affords a masterly treatment of the subject, presenting the available information and conclusions in such a way as to clarify the problem and promote constructive thinking.

The subject is one in which stores departments may well be interested, and seize the opportunity to do their part toward improving conditions. To me it has always seemed that a closer co-operation of the several branches dealing with the subject would be beneficial. A. J. MUNN

District Storekeeper, Great Northern.

### Railway Purchases and Traffic

FROM THE RANKS.

## TO THE EDITOR:

Your editorial on Railway Purchases and Traffic, which appeared on page 367 of the February 6 issue seems to me like a helping hand held out to a weary swimmer struggling with cross currents in the deep waters he must traverse. As a purchasing officer I find that some sellers and producers enter the purchasing agent's concourse and compete there with others for business and, if they lose, they go to the other departments (most frequently the traffic department) and work on the susceptibility of the officers there and endeavor to carry the matter beyond the condition of "other things being equal." Sometimes the endeavor to exert undue influence upon the purchasing department is made even when the seller enters the competition for the purchasing agent's order.

There seems to be a growing tendency in this direction and against which the purchasing agent may well appeal, beset as he is by the three fold adversity of the seller and the traffic officer striving for more business, the railroad company's engineers and operators demanding absolute quality and infallible service, and those monitors who are continually warning us against extravagant expenditure and statutory infraction. "Reciprocity," too zealously advocated, adds to the purchasing agent's tribulations and makes good buying impossible. A RAILWAY OFFICER.

### Locating the Rails with Transverse Fissures

CHICAGO.

## TO THE EDITOR:

Apropos the discussion of transverse fissures provoked by the recent accident on the St. Louis-San Francisco, is it not pertinent to suggest the importance of finding a method for detecting the presence of interior defects in rails in track?

The causes of fissures have been argued for nearly 15 years and unanimity of opinion is still apparently a long way off. Ultimately the cause may be found to lie in some detail of manufacture subject to correction at the mill by specification or otherwise, or else Mr. Howard's theories will prevail. Possibly some combination of these

matters will be found responsible. If the cause is finally attributed to some mill condition it is highly improbable that the relief will be definite, and it will require years to effect positive and complete relief. The cause of split heads, for example, has been fairly well established for a long time, but for one reason or another is largely neglected and these defects continue to constitute a very large proportion of all rail troubles in track. Similarly, the overnight acceptance of Mr. Howard's theory would not especially clear the situation, but rather complicate it.

Therefore, while the subject is being further argued, and in fact for years to come it seems perfectly safe to predict a constant insecurity against disasters due to fissures on the 300,000 miles of main railroad tracks. So far, the detection of fissures has been left to the purely visual efforts of the trackmen and at times to the automatic signals. Such is not sufficient for the most insidious menace to the safety of railroad track.

Although not meaning to detract in the slightest from the necessity of exerting every effort to get at the real reason for fissures, it seems to me that the time has come when attention should be concentrated on the development of a means for detecting weakened and defective rails in track. Naturally, I can only be vague about this matter, but a small inspection car of moderate cost must be produced which may be run over the tracks frequently to obtain magnetically, or by means of radio detector tubes, sufficient indication of defective rails to justify their quick removal. This subject has been discussed with one of the greatest electrical experiment stations in the country and perhaps the Bureau of Standards and others should lend their aid. Perhaps also the railroads should make the matter an attractive field for experiment.

C. W. GENNET, JR.,  
Manager, Rail Department, Robert W. Hunt Company.

### Captain Beyer and Company Unions

WASHINGTON, D. C.

## TO THE EDITOR:

An editorial in your issue of February 13 criticises Captain Beyer for going out of his way in his address on Union-Management Co-operation to disparage "company unions" or "employee representation." I was present at the meeting but derived a distinctly different impression from Captain Beyer's remarks from that of your editorial writer. Instead of deviating from his subject to attack company unions, Captain Beyer seemed to me to be making an honest attempt to answer a question which he had reason to believe most, if not all, of his listeners wished discussed, namely, "Why cannot the benefits of union-management co-operation be obtained equally well or better through the agency of company unions?" One may agree or disagree with Captain Beyer's conclusions or the reasoning by which he arrived at them, but he can scarcely be taken to task for frankly facing the question and setting forth his opinions on it with moderation and restraint. Had he failed to touch the subject at all, many of his audience would doubtless have felt that he deliberately side-stepped it.

No one can, of course, gainsay your editorial statement that some roads on which the shopmen are organized into company unions have made substantial progress in shop efficiency. But these gains may be attributable largely, if not entirely, to the managements. Definite evidence concerning the contributions of the company unions to operating economies has not been presented to the public. In a number of instances, the company unions appear to be

more or less moribund. In others they do little beyond handling grievance cases. The standard trade unions are, of course, the first to concede that the excellent records of the Baltimore & Ohio and the Canadian National are due in large degree to the managements. But that the contribution of the men, though difficult to ascertain, has been substantial is evidenced by the testimony of officials and by the large number of acceptable suggestions which the co-operative meetings have produced.

The relative merits of company unions and standard trade unions must, as your editorial well points out, be settled by experience. But Captain Beyer's analysis of their comparative ability to elicit the co-operation of employees and his argument that trade unions, *because of their very independence*, provide a superior foundation for co-operation, are important contributions to thought on industrial relations and are to be welcomed as such. Captain Beyer asserts that co-operation, to be most effective and to continue indefinitely, must be based upon self-interest—in other words, the men must feel that they are as much concerned with more production and lower costs as is management. No one will deny that any management is handicapped in preaching the philosophy of efficiency to its men by their suspicion that it is acting primarily in the interest of the company. A similar handicap applies to company unions. Because they have frequently been instituted in opposition to trade unions and because they lack independent, full-paid leaders, the men are often disposed, rightly or wrongly, to suspect them of being more or less under company influence. The superior ability of trade unions to command the confidence of the men arises from their independence, from the fact that they are organized not by the companies but by the men, sometimes even in spite of the opposition of employers, and from the fact that they are led by full-time professional officials. Hence, when a trade union advises its members that it is to their advantage to increase output and to cut costs, it is less likely to be suspected of representing an alien interest and it is able, in consequence, to command a response which neither managements alone nor company unions can be expected to obtain.

To the present writer, Captain Beyer's argument carries conviction, but one need not agree with it to admit that it was entirely proper and indeed even necessary for him to include it in his paper. Nor does the fact that his analysis raises by implication grave doubts concerning the usefulness of company unions constitute it an attack or a disparagement of them.

SUMNER H. SLICHTER.

## A Friend of the Day Coach Speaks

TO THE EDITOR:

Permit me to take exception to the views of the writer of the letter to the editor in the February 6 issue entitled "A Criticism of Day Coach Service."

Except for what he says of the sanitary arrangements, in which I agree that he is justified, it has been my experience that the day coach service is to be preferred except for a long overnight trip. It is true that a few of the "de luxe" trains do not carry day coaches but it has been my experience that enough high speed express trains carry them, for I have never been seriously inconvenienced.

I wonder if your correspondent ever bought a seat in a sleeping car for a 150 or 200 mile ride and when he went to claim it found the section occupied by three other passengers with enough luggage for a transcontinental trip and with a child or two thrown in for good measure? Where, may I ask, can you put the luggage to say nothing

of your feet or knees? Or, if you happened to get into the section first and took the seat facing the locomotive, later did not your lady fellow-traveler scowl at you and fidget till, in desperation, you retire to the wash room for a quiet smoke to soothe your nerves? And what did you find there? A bench for four, upholstered in leather, of course, but still a bench, fully occupied so that if you wanted to smoke you could stand up and trample on the toes of your neighbors as you endeavored to maintain your equilibrium. And when you came back who occupied the seat you vacated?

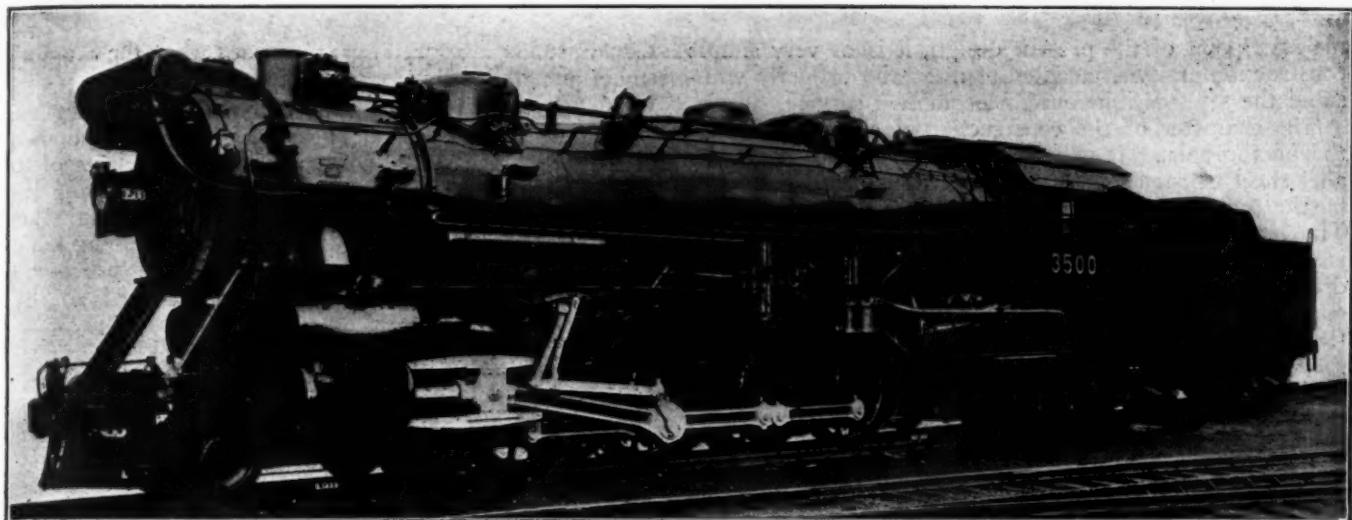
Now suppose your journey was along the banks of a beautiful river and you particularly wished to sit on the river side, could you ever find out from the ticket agent upon which side of the car the chair you bought was located? And if you took a chance, how often did you win? And having obtained one of these super-luxuriant chairs with the little folding pocket in the middle of its back, was not each adjoining chair occupied by ladies who seemed to be acquainted with each other and who were always deeply interested in some new crochet stitch or the latest wrinkle in making hash? And if you offered to exchange places with either of them so that you could read your magazine in peace, did you succeed in making the swap? As for service, let me say that I have never met more courteous public servants than the passenger trainmen on steam roads. In private life I do not employ a valet and, naturally, when traveling am usually able to get along nicely without much personal service. I do not recall ever having received a surly reply to a question propounded; and when the car was too hot or too cold upon request measures were taken to rectify the situation or a reasonable explanation was forthcoming when it was impossible to do so. How different this is from all the passes the Pullman porter makes in an effort to convince you that he is really doing something for you. And I wonder if he would really do these things if the traveling public were to discontinue the tipping habit.

As far as comfort is concerned, the day coach certainly "has it all over" the sleeping car. You are provided with a rack for your luggage and a rail for your feet. You also have plenty of room in which to stretch your limbs. On limited trains, you can usually choose your location in the car and if alone, you can generally have the whole seat to yourself. If not, the chances are that you will fall in with a sociable companion.

I seldom find that I can plan a trip definitely enough to make reservations ahead for each stop and, therefore, cannot tell whether or not all of it will be made in the Pullman. Now I do not believe that my personal appearance changes with the car I ride in and, if not, how can the dining car people tell what seat I occupy? If they can, they have never made it apparent to me nor have I noticed that the service was any better in solid Pullman trains. On the contrary, I have noticed that where more than one meal was served from the same diner on a run, the service fell off considerably at the later meal and this cannot reasonably be attributed to penuriousness upon my part for, while I am not extravagant in the way of tips, I always make it 12½ per cent, which, I understand, is the accepted standard.

I often use a steam train on a "jerk water" branch of a freight road in place of the competing trolley. The coaches used are at least twenty-five years old to my personal knowledge; oil lamps, stoves 'n everything. I pay just double the trolley fare for this ride, walk a half a mile to my destination and think I am getting my money's worth. I may be a "nut" but one must have a little pleasure in life once in a while and I have not yet been able to make myself believe that all the joys of traveling are to be obtained in the Pullmans.

J. E. MOLONEY.



New York, New Haven & Hartford 4-8-2 Type Locomotive with McClellon Firebox

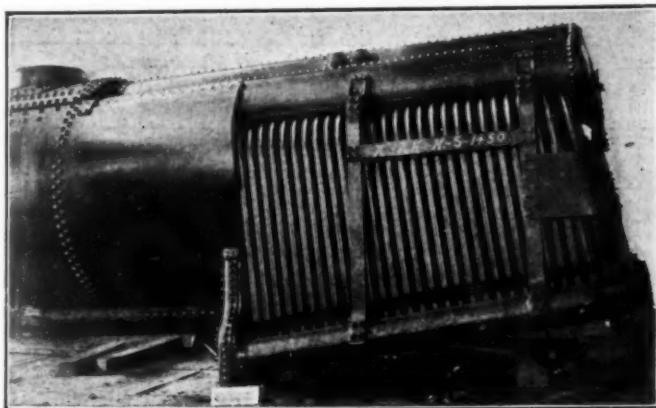
## McClellon Water-Tube Boiler Tests

*Developed on the N. Y., N. H. & H. and carrying 250 lb. pressure, locomotive shows increased economy and capacity*

**I**N 1916 the New York, New Haven & Hartford placed in service two Mikado type locomotives fitted with McClellon water-tube fireboxes, of the type for which a patent was granted to the late James M. McClellon, and is now owned by the McClellon Boiler

and to correct the troublesome features which had become apparent in actual service. These changes were made in 1920 to the two original boilers, which are still in service. In 1924, having 10 mountain type locomotives on order with the American Locomotive Company, it was decided to equip one of these locomotives with the McClellon firebox, embodying such changes in the structural design as had already been made in the two existing boilers, and including further modifications which were felt might prove to be advantageous.

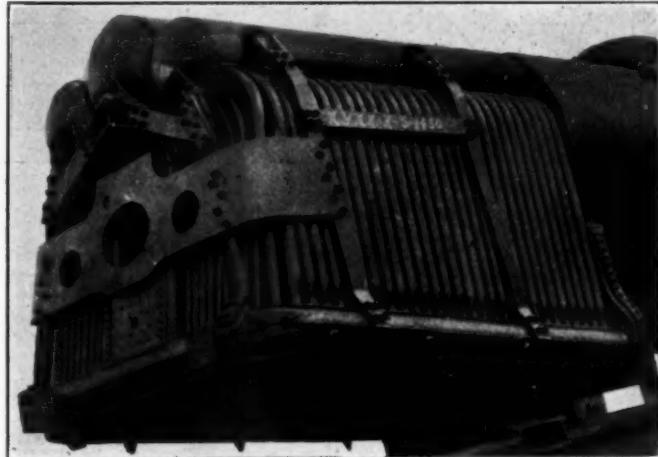
Realizing that this design of boiler is particularly



Side of the Firebox Structure

Company, Boston, Mass. These two boilers met with indifferent success. The original design developed some weaknesses in the details of its construction but showed that its fundamental principles were mechanically sound and that with a modification of the details that were giving trouble, the boiler would probably give satisfactory service. Unfortunately, Mr. McClellon died at this time, just as the boiler had demonstrated its possible practicability.

W. L. Bean, mechanical manager of the New York, New Haven & Hartford, feeling confident that this type of firebox construction possessed advantages over the ordinary radial-stayed firebox, undertook to study fully



The Firebox with the Back Head Belt in Place—This Supports the Back Head Fittings

adaptable to high pressures, one of the modifications made in the new locomotive was to increase the boiler pressure to 250 lb., which, with the use of a 70 per cent limited cut-off, would give greater steam economy. Viewed from

the standpoint of the present design, it is of very simple construction and well adapted to meet and properly withstand the stresses inherent in locomotive service.

The character of the construction is clearly shown in the photographs. It will be seen that the ordinary parallel sheet construction of the back head, sides and combustion chamber are replaced with walls of water tubes. The roof and crown sheet area in the conventional type is replaced with a section formed of three longitudinal drums extending the complete length of the firebox and combustion chamber and attached at the front end to the rear tube sheet. These drums are in contact with each other throughout their length and are so flattened at the contact areas as to permit the largest possible steam and water space. They are prevented from separating by screw rivets that keep the flat sections in continuous contact throughout.

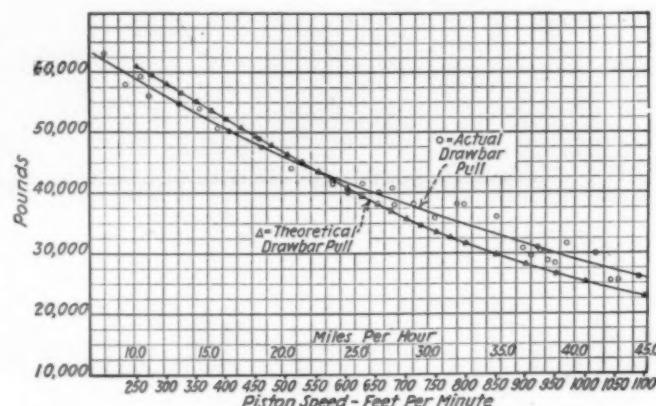
Combustion chamber and side tubes are 4 in. in outside diameter, swaged to 3 in. at the ends, with walls  $\frac{1}{4}$  in. thick. The back head tubes are 2 in. in outside diameter for their entire length, with walls  $\frac{3}{16}$  in. thick. All tubes are rolled and beaded at the top ends in the drums, but are rolled and flared in the mud-ring at the bottom ends. The arch tubes are conventional in size but at the top the ends are turned up into the drums and rolled and beaded. All tubes entering the drums are on the drum radius and perpendicular at the point of entrance.

To accommodate proper seating of the tubes in the mud-ring, the top wall is flattened inside and outside. The outside of the bottom wall also is flattened. Through it holes are tapped opposite each tube to permit the initial installation of tubes and such inspection and maintenance as may be necessary. These holes are closed with plugs, all of which do not constitute washout plugs but on the contrary are so-called "construction plugs."

There is a slight clearance between all tubes forming the firebox construction in order to permit of easier installation. Lagging and protection is applied on the sides

Duplex stoker is applied but is not used when the Standard stoker or similar types are applied.

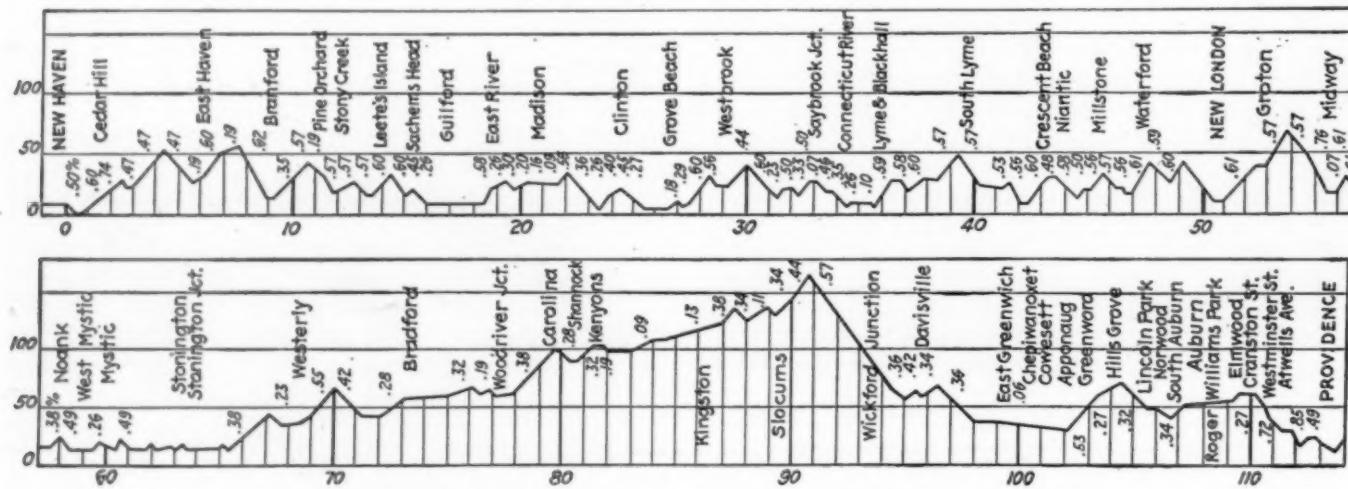
The fire door opening is a combination water-leg and water-tube construction. The section below the door is of a conventional stayed construction, and the sides of the door opening are formed by large tubes joining the stayed section at the bottom and connected near their upper ends by the top member of the door opening which is rectangular in section. Regular 2-in. tubes are carried



## A Comparison of the Theoretical and Actual Drawbar Pull Curves for Engine 3500

from the upper ends of the large tubes and from the top member of the door frame up to the drums in the same manner as the main back head tubes, with plugs located on the underside of the rectangular member opposite the tube holes.

One of the troubles with the original construction was lack of provision for any column action to take the stresses between mud-ring and drums independently of the tubes.



#### Profile of the Division Over Which the Dynamometer Tests Were Run

and back head, outside of the tubes, to which reference will be made later. All back head tubes are staggered at the entrance into the drums because of the relatively restricted section forming the crown, as compared with the length for tube spacing available in the mud-ring.

The illustrations given are all taken from locomotive 3500, which is equipped with a Duplex stoker. Several of the back head tubes are bent away from their normal position in order to permit entrance of the stoker distributor tubes. This construction is used where the

This situation is avoided by a series of braces between the mud-ring and the drums so arranged as to form, in combination with the drums and mud-ring, a hollow box girder type construction. This relieves the tubes of any duty other than that of steam and water containers under pressure. Shocks incident to locomotive service are transmitted through this bracing construction and kept away from the tubes. This is evident from continuously tight water tubes, even under severe and unusual operating conditions. The braces are tied together by hori-

zontal members of rectangular section to give additional stiffness. All bolts are fitted and care taken in the original construction at the builder's works to give long life in service, a condition which has been met successfully.

The arrangement of bracing, being free from triangulation, permits the necessary free longitudinal movement of drums relative to the mud-ring resulting from temperature differences between the mud-ring and crown sheet areas. Similar construction is employed at the back head. An arch effect is obtained through the use of the diagonal



**The Construction of the Back Boiler Head—The Back Head Belt Has Not Yet Been Applied**

braces which connect the column members to the center drum.

A so-called back head belt of wide plate section is bolted to the back head braces and carried around to the rear braces on the sides of the firebox. This not only forms a part of the back head bracing, but serves as a foundation on which all of the back head and cab fittings are applied, thus relieving the tube and drum structure. The form of this plate is clearly shown in one of the illustrations.

The throat sheet at the front end of the firebox is generally similar to the ordinary throat sheet in conventional boilers, except that it is vertical and is arranged as to give greater accessibility for washing out. The back plate of the throat is flanged outwardly to receive the front ends of the hollow mud-ring, and opposite the mud-ring connections the front throat sheet is fitted with hand hole plates similar in construction and arrangement to those used in marine and stationary practice. The top points at the sides of the throat are fitted with caps and vented through copper pipes which permit the escape of steam into the steam space in the central drum.

The combustion chamber, like the firebox, is of water-tube construction, but it is encased in a dry shell extension of the third barrel course. This course provides the structural strength for the connection of the firebox and the barrel portions of the boiler. It will be seen in the photographs that at the top it is securely riveted to the two outside drums throughout the length of the combustion chamber and that the inside and outside throat

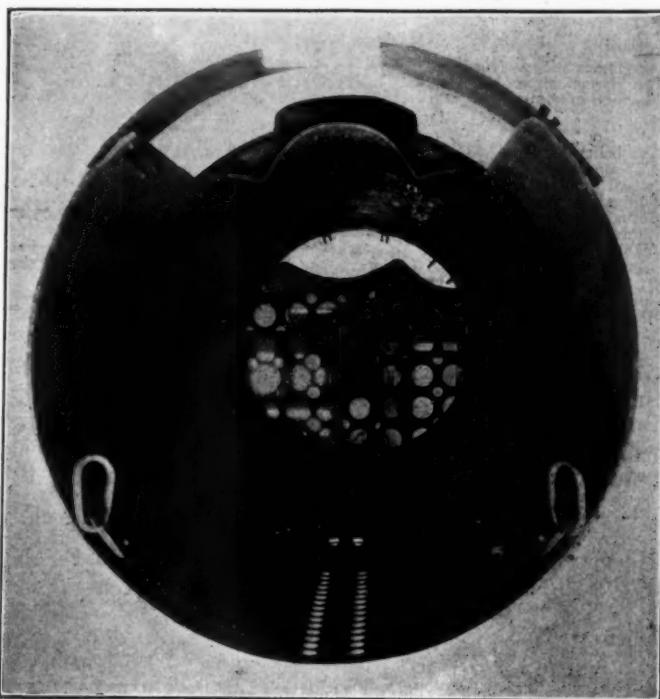
sheets are riveted to it at the bottom. The rear tube sheet is riveted in the third barrel course and is flanged at the top to receive the front ends of the three drums which form the top of the firebox.

To permit the transfer of water from the barrel of the boiler to the firebox and combustion chamber a circulating trough is riveted on the outside of the third course at the bottom. The front end extends ahead of the tube sheet and opens through the shell into the boiler, while the rear end is riveted into a flanged opening in the outside throat sheet.

All combustion chamber tubes enter the side drums at their upper ends in line with the firebox tubes. The bottom ends of all except the rear tube on each side open into the circulating trough through holes in the dry shell. The rear tubes open directly into the throat sheet water space.

The lagging on the outside of the firebox is composed of a protection plate, insulation and jacket. The lagging is made up in sections with each panel self-contained in order to permit the removal of lagging in sections without the necessity of wholesale stripping for access to tubes and other parts. The lagging is applied after the tubes have been covered with an asbestos cement.

No detailed study has been made of circulation in this boiler, but observations of the bare boiler, fired up during construction and without any lagging or insulation what-



**Interior of the Combustion Chamber Dry Shell Before the Application of the Firebox Drums**

ever, indicate a very uniform warming up of the entire boiler from front end to back head without the usual unequal heating normally experienced in the radial-stayed construction. The time required to fire up the cold boiler is only two-thirds of the time usually required with the radial-stayed construction. There is a very noticeable scouring action through the tubes of the firebox and combustion chamber, undoubtedly due to the rapid and positive circulation and indicated very definitely by lack of mud and scale in the mud-ring and tube area. Most of the mud accumulated is relatively soft and is deposited in the trough section. In other words, the dead corners of

the conventional boiler and firebox are absent in the McClellon construction.

The freedom from unequal heating, momentary distortion of the firebox while warming up, more rapid circulation and absence of dead corners that give rise to mud and scale accumulation all indicate a better type of boiler construction than normally used. The time required to wash one of these boilers is only about one-half or two-thirds of the time required for the ordinary boiler. Stresses due to unequal temperature conditions are greatly

tions are experienced from any cause than is the case with the conventional locomotive boiler.

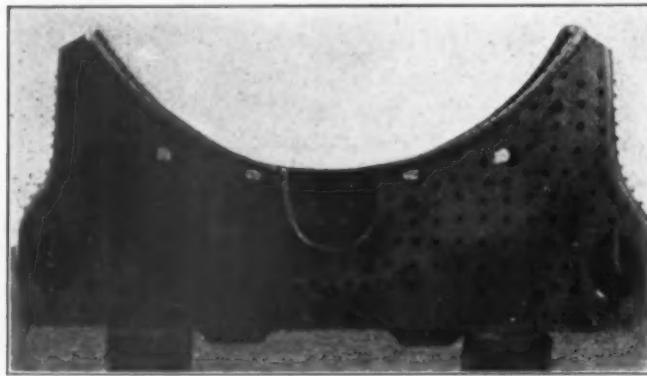
The arrangement of outside throttle and superheated steam on most of the auxiliaries is in keeping with present day practice. An Elesco feedwater heater and Duplex stoker are applied, the front end is fitted with Okadee hinges and the air operated whistle uses superheated steam.

When this locomotive was built as many dimensions and characteristics as possible were kept the same as the conventional engines built at the same time from the U. S. R. A. light mountain type design for fast freight service. Thus, all tests could be made on a comparable basis as between the McClellon firebox and the standard

#### SUMMARY OF THE TEST RESULTS

Test Conditions		Per cent increase or decrease for eng. 3500	
	Engine 3324	Engine 3500	
Av. running time, min.	254	254	
Av. delayed time, min.	88	106	20.0 inc.
Distance, miles	107	107	
Av. number of cars per train.	90.5	87.0	3.9 dec.
Av. actual tons per train.	4,360.6	4,556.0	4.48 inc.
Av. equated tons per train.	4,486.5	4,640.0	3.2 inc.
Av. cut-off per cent.	44.8	38.5	16.5 dec.
<b>Locomotive Outfit</b>			
Av. drawbar pull (integrated), lb.	27,725	29,306	
Million ft.-lb. work at the drawbar	15,669	16,557	5.7 inc.
Dynamometer hp. (true average)	1,872	1,982	5.9 inc.
<b>Fuel Performance</b>			
Coal fired, average per trip	23.725	21,400	10.7 dec.
Coal fired, per dynamometer hp-hr., lb.	2.99	2.55	14.7 dec.
Coal fired per 1,000 gross ton-miles, lb.	50.9	44.4	12.7 dec.
Coal fired per sq. ft. grate per hr., lb.	79.1	71.6	9.5 dec.
Dry coal per dynamometer hp-hr., lb.	2.95	2.50	18.0 dec.
Dry coal per 1,000 gross ton-miles, lb.	49.96	43.41	13.1 dec.
Dry coal per sq. ft. grate per hr., lb.	77.6	70.0	9.8 dec.
Average thermal efficiency	6.46	7.47	15.6 inc.
<b>Machine Performance</b>			
Av. indicated hp. (reading intervals)	2,503.8	2,696.0	7.67 inc.
Av. dynamometer hp. (reading intervals)	2,203.4	2,347.0	6.52 inc.
Machine efficiency, per cent	88.0	87.0	1.1 dec.
<b>Boiler Performance</b>			
Av. boiler pressure, lb.	194.8	241.1	24.0 inc.
Av. superheat, deg. F.	192.5	196.7	2.18 inc.
Actual evaporation, lb. per hr.	42,963	43,189	0.5 inc.
Equivalent evaporation, lb. per hr.	56,750	56,821	0.1 inc.
Actual evaporation per lb. dry coal, lb.	7.81	8.75	12.0 inc.
Equivalent evaporation per lb. dry coal, lb.	10.32	11.50	11.4 inc.
Actual evaporation, lb. per sq. ft. evaporating surface, per hr.	10.40	10.64	2.3 inc.
Av. lb. water evaporated per dynamometer, hp. hr.	22.95	21.8	5.0 dec.
Av. boiler efficiency, per cent	74.59	81.53	9.3 inc.

reduced as indicated by considerably less maintenance on the firebox and combustion chamber portion of the boiler. Both running and back shop repairs are less on the boilers with this type of firebox than on those with the conventional type of firebox. The ten years' experience of the



A Front View of the Throat Sheet, Showing the Flange for the Circulating Trough

New Haven indicates that the maintenance cost is reduced about one-half, and there is also a considerable increase in the time available for service.

There is greater potential capacity in this type boiler when the locomotive is running before low steam condi-

#### DIMENSIONS, WEIGHTS AND PROPORTIONS OF ENGINE 3500, EQUIPPED WITH McCLELLON FIREBOX

Type of locomotive	4-8-2
Service	Freight
Cylinders, diameter and stroke	27 in. by 30 in.
Valve gear, type	Southern
Valves, piston type, size	14 in.
Cut-off in full gear, per cent	70
Weights in working order:	
On drivers	243,500 lb.
On front truck	59,500 lb.
On trailing truck	57,000 lb.
Total engine	360,000 lb.
Tender	189,000 lb.
Wheel bases:	
Driving	18 ft. 3 in.
Total engine	40 ft. 10 in.
Total engine and tender	76 ft. 5½ in.
Wheels, diameter outside tires:	
Driving	69 in.
Front truck	33 in.
Trailing truck	43 in.
Boiler:	
Type	McClellon
Steam pressure	250 lb.
Fuel, kind	Bit. coal
Diameter, first ring, outside	78¾ in.
Firebox, length and width	120 in. by 85 in.
Arch tubes, number and diameter	4-3 in.
Firebox tubes, number and diameter	68 in.
Sides	58-4 in.
Back	28-2 in.
Combustion chamber	30-4 in.
Tubes, number and diameter	201-2½ in.
Flues, number and diameter	40-5½ in.
Length over tube sheets	20 ft. 6 in.
Grate area	70.8
Heating surfaces:	
Firebox—	
Drums	.81.8 sq. ft.
Back section	.46.5 sq. ft.
Side and back tubes	.187.0 sq. ft.
Combustion chamber tubes	.115.8 sq. ft.
Arch tubes	.27.0 sq. ft.
Total	.458.3 sq. ft.
Tubes	2,469
Flues	1,134
Total evaporative	4,061
Superheating	1,009
Comb. evaporative and superheating	5,070
General data estimated:	
Rated tractive force, 70 per cent cut-off	63,390 lb.
Cylinder horsepower (Cole)	3,090
Steam required per hour (Cole)	58,710 lb.
Boiler evaporative capacity per hour (Cole)	63,072 lb.
Weight proportions:	
Weight on drivers + total weight engine, per cent	67.7
Weight on drivers + tractive force	3.81
Total weight engine + comb. heat. surface	.71
Boiler proportions:	
Boiler hp. + cylinder hp. per cent	107.2
Tractive force X dia. drivers + comb. heat. surface	862.7
Cylinder hp. + grate area	43.7
Firebox heat. surface + grate area	6.5
Firebox heat. surface, per cent of evap. heat. surface	11.3
Superheat. surface, per cent of evap. heat. surface	25.0

locomotive, thereby eliminating variables that would tend to influence conclusions. Consequently, the cylinder and wheel sizes, grate area, heating surface, superheater surfaces, etc., were all kept at the same values and the changes in the McClellon equipped locomotive were confined to the firebox arrangement, boiler pressure, valve events and, to some extent, the weight on drivers. Virtually the same limitation on axle loads held good for the McClellon equipped engine as were imposed in the case of the standard type.

After receipt from the builders in 1924, this locomo-

tive, road No. 3500, was placed in regular freight service and was later subjected to extensive tests in comparison with one of the standard engines, road No. 3324. The tests with both engines were conducted over the same division, from New Haven, Conn., to Providence, R. I., a distance of 113 miles. It will be seen from the accom-



The Firebox Walls Closed, Ready for the Lagging and Jacket

panying profile that eastbound, with the exception of a start at each end of about three miles, and the climb from Wood River Junction to the summit a mile east of Slocums, a distance of 14 miles, and westbound, from East Greenwich to the same point, a distance of about

tender and was of the same quality for all runs. The average heat value was close to 13,500 B.t.u. per lb. of dry coal.

One of the tables gives a comparison of the principal dimensions of the two locomotives tested. It will be seen that although both have the same cylinder dimensions, engine 3500 had the advantage of 50 lb. per sq. in. in steam pressure, with a consequent higher tractive force of about 17.6 per cent. This higher tractive force is obtained with an increased weight on drivers of only six per cent, or in other words, with a reduced factor of

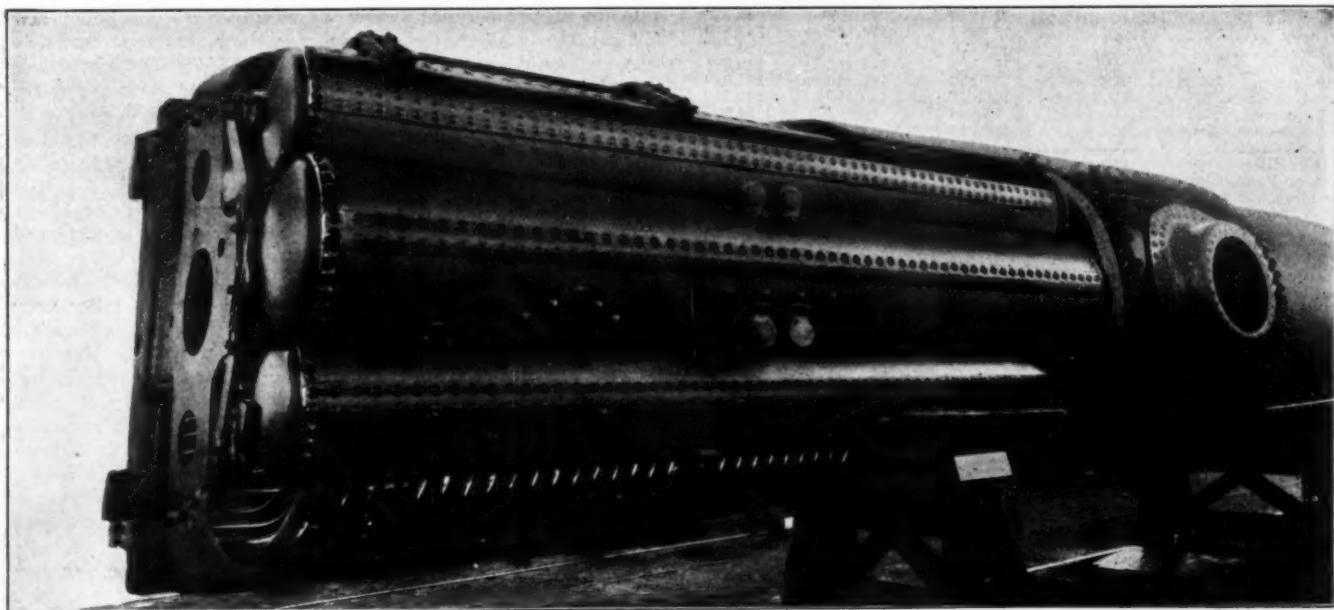
COMPARISON OF THE PRINCIPAL CHARACTERISTICS OF THE TWO LOCOMOTIVES TESTED

	Engine 3324	Engine 3500
Type	4-8-2	4-8-2
Boiler	Firetube	Firetube
Firebox	Radial-stayed	McClellon
Weight on drivers	230,500 lb.	243,500 lb.
Total weight, engine and tender	518,800 lb.	549,000 lb.
Boiler pressure	200 lb.	250 lb.
Cylinders	27 by 30 in.	27 by 30 in.
Maximum cut-off	85 per cent	70 per cent
Diameter of driving wheels	69 in.	69 in.
Tractive effort	53,900 lb.	63,390 lb.
Factor of adhesion	4.28	3.81

adhesion. The locomotive required no more care in handling than the other engines with the higher adhesion factor because of the smoother torque resulting from the relatively shorter cut-offs.

The first tests with engine 3500 were conducted to establish the maximum tonnage which the engine was capable of handling. Starting with 4,000 tons equated on a 75-car basis, the load was increased to 6,547 equated tons. The engine started and accelerated this train without difficulty on a .142 per cent grade. Tests with greater tonnage were prevented by lack of available tonnage because of the coal strike and the maximum capacity of the locomotive is undetermined.

A comparison of the outstanding items in the per-



Top of the Firebox and Combustion Chamber

seven miles, all of the adverse grades may be considered as momentum grades. The profile shows a continued succession of favorable and adverse grades, very few of which are more than two miles long. Particular pains were taken to have all readings the same during both tests, and to have them taken at the same predetermined locations throughout the series of runs. All coal used was accurately weighed by means of scales placed on the

performance of the two locomotives taken from the summary of the tests is given in one of the tables. From these results it may be seen that engine 3500 hauled 3.2 per cent more tonnage than engine 3324, maintaining the same average speed and the same running time over the division, while working at a 16.5 per cent shorter cut-off and at the same time used 10.7 per cent less coal than did engine 3324. This resulted in a decrease of 15.1

per cent of coal per 1,000 gross ton-miles. No material difference in superheat was noticed on the two locomotives.

Because of the higher boiler pressure and limited cut-off of engine 3500, a saving of 5 per cent in pounds of water per dynamometer hp. hour was obtained, which, coupled with the 12.0 per cent increase in pounds of water evaporated per pound of coal, resulted in a decrease of 18 per cent in dry coal per dynamometer hp. hr. The McClellon boiler of engine 3500 shows an increased efficiency of 9.4 per cent over the standard boiler of engine 3324, while there was an increase in overall thermal efficiency of 15.6 per cent in favor of engine 3500.

The results of this service and the tests were so satisfactory and so conclusively demonstrated the advantage of the McClellon boiler that, when ten new engines were recently purchased for the road, there was no question or discussion as to the type of boiler to be used. The McClellon water-tube boiler was ordered to be placed in all of them.

## Freight Car Loading

WASHINGTON, D. C.

**R**EVENUE freight car loading in the week ended February 20 amounted to 931,743 cars, an increase of 5,857 cars as compared with the loading for the corresponding week of last year and of 86,044 cars as compared with 1924. Increases were reported from the Pocahontas, Southern and Southwestern districts and in the loading of grain and grain products, coal, coke, merchandise and miscellaneous freight. The summary as compiled by the Car Service Division of the American Railway Association follows:

REVENUE FREIGHT CAR LOADING—WEEK ENDED SATURDAY,  
FEBRUARY 20, 1926

Districts	1926	1925	1924
Eastern	216,240	223,192	200,157
Allegheny	189,387	191,849	167,590
Pocahontas	53,496	40,919	42,647
Southern	152,708	147,882	140,341
Northwestern	116,439	116,540	113,889
Central Western	136,627	137,507	126,172
Southwestern	66,846	67,997	54,903
Total Western districts	319,912	322,044	294,964
Total all roads	931,743	925,886	845,699
Commodities			
Grain and grain products	42,958	41,188	44,048
Live stock	27,048	30,874	33,365
Coal	169,913	165,616	175,753
Coke	17,644	13,299	12,610
Forest products	77,267	83,079	77,824
Ore	10,266	11,004	8,513
Mdse., L.C.L.	255,992	254,178	213,138
Miscellaneous	330,715	326,648	280,448
February 20	931,743	925,886	845,699
February 13	917,144	903,935	935,589
February 6	914,904	929,130	906,017
January 30	925,263	897,368	929,623
January 23	921,734	924,291	891,481
Cumulative total eight weeks	7,195,801	7,215,900	6,981,575

### Car Loading in Canada

Revenue car loadings at stations in Canada for the week ended February 20 totaled 56,154 cars, showing little or no change for the previous week, and for the same week last year.

Commodities	Total for Canada			Cumulative totals to date	
	Feb. 20,	Feb. 13,	Feb. 21,	1926	1925
Grain and grain products	6,521	6,656	7,233	54,275	46,800
Live stock	1,744	1,849	2,073	14,110	16,336
Coal	5,047	5,347	6,021	37,938	41,742
Coke	781	849	288	3,858	2,193
Lumber	3,533	3,002	3,283	20,836	19,980
Pulpwood	4,484	4,681	4,932	28,854	29,775
Pulp and paper	2,708	2,742	2,210	18,808	14,944
Other forest products	3,913	4,032	4,059	24,681	23,477
Ore	1,472	1,519	1,143	10,012	7,944
Merchandise, L.C.L.	14,603	14,537	14,248	99,526	95,437
Miscellaneous	11,348	11,149	10,658	73,402	68,626
Total cars loaded	56,154	56,363	56,148	386,300	367,254
Total cars received from connections	35,812	35,998	35,866	243,017	239,576

## Stabilization of Employment on the D. & H.

**A**TENTION was directed in an editorial in the *Railway Age* of February 20, entitled "An Achievement in Stabilizing Employment," to the fact that the shop crafts employees on the Delaware & Hudson were not laid off during the anthracite strike. The following letter from the president of the Delaware & Hudson, L. F. Loree, to all the officers and employees, dated February 17, 1926, is of special interest in this connection. The letter follows in full:

Now that an agreement has been reached between the producers of anthracite coal and the United Mine Workers' organization, traffic will, it is hoped, resume at least normal movement. A calamity that has imposed so much hardship upon both this railroad and its employees ought not to pass unnoticed.

It is especially interesting because of the agreement entered into between the company and the mechanical craftsmen in 1922, which provided, among other things, for an elastic day. Before this time the practice on all railroads had been that these forces were recruited to take care of a full volume of business, and that as business fell off the younger men were relieved from the service. Few things are more important to the employees than continuity of employment, and the advantages which were expected to result from the use of the elastic day were that the forces would be organized on the basis of minimum employment under normal conditions, so that the occasion for relieving men would not be presented, and as business increased the number of hours would be increased, giving the men an opportunity to participate, by their increased earnings in the prosperity of the company. The company would benefit by a reliance upon a force educated to its methods and trained to work together, instead of the work being demoralized by the introduction of new men ignorant of our practices.

The plan did not contemplate such a radical reduction in business as the anthracite strike brought about, and the company was, on September 1, 1925, compelled to face an unlooked for emergency. If all work by the backshop and heavy car repair forces had been suspended, using only a strengthened roundhouse and light car repair force, the records now show that the company's expenses would have been reduced by \$1,884,768.00. Had these forces been put on a schedule of three eight-hour days per week, the expenses would have been reduced by \$813,673.00. As is known, the working time was fixed at eight hours per day, five days in the week, and under that arrangement not an employee in these groups has been laid off because of lack of work.

It is much to be regretted that some such arrangement could not have been in force affording protection to employees in train and yard service, who were laid off by the loss of traffic.

In the experiment we are jointly conducting to stabilize employment conditions, the burden of the first real test has fallen upon the management. They feel no cause to regret having frankly faced their responsibilities. With the resumption of business our bad order locomotives are no more than 11 per cent, and the bad order cars 3.6 per cent, so that the growing traffic can be cared for without embarrassment. The forces are filled with men who are acquainted with each other and with the practices of the company. I should like to emphasize that this is only one indication of the great importance to the employees that the corporation in whose service they are should be kept prosperous and in a high state of credit, which alone makes such action possible.

It may well be that the next test will fall upon the men. Organized as the forces are on a basis of minimum traffic under average conditions, we may come into a state of high prosperity where, for a considerable period, employees will be given an opportunity to work under the elastic day a greater number of hours. This will not be without its rewards, since it will substantially increase their daily earnings.

It is a matter of real satisfaction that in the now nearly four years in which this plan has been in operation the men have rested secure in the continuity of their employment, and I make no doubt myself that both in bad times and in good the employees will put forth the same effort the company has in honestly and faithfully responding to their obligations.

# Can Brotherhoods and Managements Work Together?

*The maintenance of way organization submits a plan for joint solution of mutual problems*

By L. E. Keller

Statistician, Brotherhood of Maintenance of Way Employees, Detroit, Mich.

THE Brotherhood of Maintenance of Way Employees (formerly the United Brotherhood of Maintenance of Way Employees and Railway Shop Laborers), at its twenty-second convention on September 17, 1925, invited the railway managements to join the brotherhood in a program of industrial peace, co-operation and improved service, efficiency and relationship. The resolution adopted read as follows:

"Whereas, through a program of co-operation between the managements of the railways and their organized maintenance of way employees, we believe that the mutual interests of the managements and maintenance of way men can be more properly protected and improved, in that the brotherhood and the management can advance out of the period of antagonism now existing into a period of co-operation, with the result, we believe, that substantial improvements can be made in the maintenance of way department, that a substantial reduction in the cost of operating the maintenance of way department can be effected, that the morale of the employees can be substantially improved, that the relationship between management and men can be made one of peace and harmony rather than one of antagonism and suspicion, and that through the consummation of these clearly desirable principles the management and the employees can and should share in the financial savings to be realized, and

Whereas, the principle or policy of co-operation between railway managements and employees has been proved to be a logical, practical and desirable thing as has been demonstrated on the Baltimore & Ohio and other railways which have entered into the plan with their maintenance of equipment employees.

Therefore, be it resolved, that this brotherhood declare itself willing and anxious to enter into a program of co-operation with the management of any railway that will accept our co-operation, it being distinctly understood that the acceptance of this plan shall be a recognition of this Brotherhood and an agreement of co-operation must be between such railway and this organization, and it being further understood that such a plan must provide not only for improvement in savings to management, but likewise for improvement and the privilege of sharing in the financial savings on the part of maintenance of way employees.

Be it further resolved, that the grand president be directed to provide a copy of this resolution for the general manager of each railroad in the United States and Canada with a request that such railway advise this brotherhood of the position it will take in connection with this invitation for co-operation."

The brotherhood has, therefore, invited peace and co-operation and waits for railway managements to accept or reject our offer. The men hope it will be accepted in order that they may demonstrate their willingness and ability to assist in the improvement of service and relationship through the brotherhood and managements pulling together.

## Mutual Interest is Essential to Success

No good will be realized by the management looking upon the employees' organization as a nuisance or necessary evil; no good will come from the employees looking upon management as a heartless machine which demands the last ounce of energy for the least possible wage; both can profit and best serve the public by a mutual, co-operative effort toward improved efficiency, economy, and

service and both should, in fact must, be permitted to share fairly in the savings and benefits realized.

No plan of co-operation, however well prepared, can succeed without the "actual co-operation" of the men themselves. The men actually at work as laborers, mechanics and subordinate officers must get into the thing with both feet, must understand it, believe it, want it, and do it. They must forget the foolish idea that employer and employee are supposed to be on different sides of the fence, or that the management and the labor union are expected to be hostile at all times and on all matters. Lambs and lions may not lie down together but we are not lambs or lions.

In a way co-operation between management and men might be compared with the oil in our automobile—when applied it removes the friction between the two organisms of the transportation machine, makes the going easier and cheaper, insuring more efficient service and enabling those who use the machine to ride in greater comfort, security and economy.

Successful co-operation must be handed up from the men actually at work, not handed down from representatives of the management and the men's organizations. From the top it can be planned, directed and encouraged, but when we reach the "put it over" point the men at work must do the job; nobody else can.

Employees must know that their chief engineer and other railway officers are keenly interested, and positively in sympathy with the program of co-operation. They must know that their brotherhood feels the same way and this same spirit must prevail straight through from the chief engineer and grand president down to the water boy and the new member taken in at the last local meeting.

Co-operation, to be successful, must be between the workers' legitimate bona fide labor organization and the management. The worker believes in his organization. To him it gives the program a beginning in which he has confidence. It convinces him that the whole program is on the square, open and above board. Without this confidence he will not enter into the spirit of the plan. To ignore his organization is to kill his confidence, his enthusiasm, his desire for the plan. In fact, it inspires a feeling of antagonism and his response will be either one of open defiance or sullen acceptance. Neither will allow the plan to prove its worth.

## A Controversial Attitude is Destructive

The maintenance of way employees experienced an antagonistic response to their organization for years. They are not even on a bed of roses today. A few years ago this opposition to their labor union was open and clearly evident. Peculiarly enough it still prevails among division officers and the men on some roads, even where signed agreements specifically recognize the right to or-

ganize. The officers at the head of our department are not responsible for this condition. Several investigations by the writer have revealed that division officers have followed a program of guerrilla warfare on the brotherhood when those higher up were positively opposed to such action. Many division officers, trained in the old school when membership in a labor union was an unpardonable sin, are finding it difficult to grasp the spirit of the new industrial era in which they live. They feel that they are pleasing the management when they create friction in labor unions or throw stones in the path of the brotherhood. The fact is that they are increasing the cost of running our department; men are divided and frequently spend time in debating their membership or non-membership, that should be spent in slipping another tie in the track. Factions are created and encouraged among the men, the gap between officers and men widened, morale is destroyed and the result is that this same division officer is not turning in the efficient and economical work that the railroad is entitled to. Whose fault is it, and who pays for it?

On the other hand, there are employees who think a labor union must carry a chip on its shoulder at all times, that force rather than reason should be its weapon, and that the union is required to throw its support behind them in any difficulty, no matter how much they may be to blame for their misfortunes. A paid-up card will never be a substitute for an honest day's work, and a grievance committee will never be a guarantee against loss of employment when dismissal is justified, but some members of unions, trained in the old school of antagonism, find it difficult to adjust themselves to the new industrial era and still feel that might rather than right prevails.

#### A Gap Exists Today

Railway employees and management are not pulling together as they should be. Place the blame for this where you will. If you are part of the management it will be easier to blame the men or their labor organizations for the existing lack of close relationship; on the other hand, employees will find it easier to blame the management or organized capital. Perhaps the blame can be shared by both. However, the gap is there, and as stated by a man of long experience on one of the leading railways in a letter to Henry Clayton Metcalf, director, Bureau of Personnel Administration, New York City, "this gap is not to be bridged by any flimsy statement on the part of the officers that they are interested in their employees. It has got to be a real honest and on the square proposition."<sup>\*</sup> In a plan of co-operation, the men must likewise meet the proposition with an honest and on the square effort to put it across. Aside from any other feature, both management and men can well afford to do so for their own individual, as well as their mutual, selfish interests. For the same selfish reasons the public can put its shoulder to the wheel because peace, harmony and efficiency in the transportation industry are vitally necessary to the public welfare. When management and men disagree, the service is impaired, sometimes seriously crippled, and no matter what is right or wrong, the public pays.

There is nothing in this step, from either the managerial or the employee side, that smirks of a surrender or compromise by either group. It is no sacrifice of managerial dignity or authority, no acknowledgment of weakness or surrender of rights by the organization of employees. It is pure and unadulterated common sense applied to a mutual problem for the mutual benefit of public, management and men. The management will continue to run their roads, the employees will still need and run their

organizations and both will co-operate to secure the greatest amount of good for each other, through helping each other, respecting each other, and meeting each other with a full realization that they are both necessary parts of industry rather than enemies on the industrial battlefield.

#### Some Practical Requirements

Admitting then that the theory of co-operation is good, what practical support has it? How will it be developed and what workable plan does the Brotherhood of Maintenance of Way Employees present to justify acceptance of its offer of co-operation?

In the first place, it is the opinion of the writer that neither management nor brotherhood could ever prepare a complete and final plan and expect the other party to sign on the dotted line. In the second place, it is not felt that a final working program could or should be developed at the beginning because as co-operation grows the possibilities and practical advantages will become more apparent and workable, justifying extension and perhaps necessitating revision of the plan.

There is nothing mysterious about co-operation. It simply means a mutual effort of management and men, pulling together for the benefit of both and incidentally for the public. It can be developed into an elaborate plan but the elaboration must not come too fast. We must grow with the plan and allow all concerned to know what is being done and how and why. An extensive program that would work smoothly after one or two years' experience would only result in confusion, possibly complete failure, if jumped into at the very start. Rome was not built in a day.

However, something for a basis must be provided from which a mutually agreed program can be developed in conference and this first program can be further developed as the workability of co-operation becomes more apparent. Having developed a starting plan the next move should be in the nature of publicity and education. The officers and employees must know what and why it is.

The success of co-operation depends upon providing all the participants with all the facts and each side must be willing to believe the other side's facts; in other words, they must have confidence in each other and in the program. It must be realized that there are always two sides to a question and frequently three—yours, mine and the right side. The plan must be properly understood and cheerfully accepted. Indifference, suspicion, or selfishness will prove deadly. Neither side should expect too much reward in a financial way or disappointment may later endanger its success. The plan will succeed only to the extent that we make a success of it, and the success or failure lies primarily with the men and division officers, not solely with those up above.

#### A Suggested Organization

The working machinery should consist of a committee on each division, composed of the division officers and representatives of the brotherhood local lodges from the track and the bridge and building departments. Monthly meetings should be held. A system committee of a balanced number of officers and men should meet, say quarterly, in the chief engineer's office to consider all proposals sent in by the division committee meetings. Division committees should discuss their problems and make recommendations to the system quarterly meetings; these quarterly meetings should consider such recommendations and also discuss the general system affairs, making such additional recommendations as are considered beneficial. The management should accept or reject such proposals, giving their reasons for turning recommendations down, in order that all may understand the reason therefor.

<sup>\*</sup>Railway Age, December 13, 1924—page 1062.

Things that look good to a committee will not always appeal to those who pull the company's purse-strings.

Grievances arising out of the application or misapplication of existing working agreements should not be dealt with in these co-operative meetings. Wages and working conditions should be handled by the negotiating committees of the brotherhood in the usual way. In the interest of co-operation grievances, when found, should be adjusted promptly. Better still, they should be avoided, but never ignored or delayed. In any event grievances should be left with the brotherhood grievance committee and not injected into the co-operative meetings. They should be settled on a basis of fairness and common sense rather than along strict technical lines for a complaint dodged by a technicality is not settled and is bad for morale. Likewise an advantage won on technicalities rather than fairness is never permanent or profitable.

#### Some Subjects for Mutual Study

These monthly division co-operative meetings as well as the quarterly system meetings can develop the detailed work of the plan more satisfactorily than could be done over some "higher up's" desk, because they know the conditions to be met, the grounds for improvement, and the practical solution to their mutual problems, in a more intimate way. For a beginning, the following suggestions are offered as subjects for discussion and recommendation:

Improved methods or ways of doing various classes of work. Proper distribution, care and storage of materials.

Better co-operation between the maintenance of way department and with other departments.

Kind, quality, sufficiency and preservation of tools, motor cars and supplies.

Co-ordinating and scheduling of work for the different seasons and to better meet existing conditions.

Stabilizing employment and reduction of labor turn over.

Collection, handling and disposition of scrap tools and materials.

Improving, cleaning and beautifying right of way and stations grounds.

Securing new and additional business for the company.

Safety measures and ways of reducing the number of accidents or injuries, for both employees and the public using grade crossings, walking on the right of way, etc.

Our experience with and opinion of the kinds of tools and materials now in use.

Views of shippers, farmers, and the public as expressed relative to our railroad, its service and its policies.

The economical use of tools, supplies and materials.

Good and bad features of a monthly, semi-annual or annual budget covering our man allowance, material, supplies, etc.

A comparison of amount of work performed by different gangs, number of ties put in per man, etc.

Benefits of inspection trains taking officers and men over their divisions for inspection and awarding prizes for best sections.

When the plan is put into operation, and we all get into it with both feet, other ideas will be developed and a more systematic consummation of the program will be brought about. The foregoing suggestions are more than enough to start with.

It must be left with officers and men to develop the detailed plans covering these proposals and to work them out, it being understood that the management and the brotherhood shall hold the reins, so to speak, give final consideration to such details, and keep the plan from running wild while at the same time seeing to it that it does go.

The management should furnish statistics and information to show what can be and is being done; the brotherhood should furnish the enthusiasm and morale necessary to the success of the plan; the division officers and men should furnish the common sense and determination necessary to put it over; all of which, through co-operation, we can do.

The enlargement of these suggestions must be worked

out in joint conferences with the management and brotherhood representatives on the road under consideration, with the assistance of other brotherhood representatives who are making a study of the co-operative movement. For example, we suggest "securing new and additional business for the company," a thing clearly not in line with our daily work, yet something that can be developed to the material interest of the management when a sane campaign is conducted and our men given talking points. Our craft is peculiarly well situated to get the business from small town and farm shippers, the classes of patrons that the management's solicitors rarely get to, and no general program could outline a policy for conducting this work as satisfactorily as could be done across the table. Again, we suggest "co-ordinating and scheduling of work for the different seasons and to better meet existing conditions." In a general program this suggestion might impress the management as being impudent, but when studied from the ground up we might find room for more efficiency and economy, and in any event, an effort toward improvement in this connection is always worth making.

The fact that a working agreement already exists and local lodges of the men are already established, provides in itself a partial machinery for the extension of co-operation. The local meetings can be used as co-operative schools, where officers and men can get together after the brotherhood business has been transacted, where the exchange of ideas and suggestions for improved service can be considered, and whereby the meetings will have an atmosphere of friendly mutual relationship rather than that of one group meeting at odds with the other. Everybody will go home with more real interest in his work after such joint meetings. If he can't go home that way he is not big enough for whatever job he holds.

And so goes the development of our co-operation offer. After much thought it is the opinion of this writer that the "principle" of co-operation is the primary thing for the brotherhood and management to agree upon, following which a plan can be worked out in conference much better than by one party.

However, a basis is here set out and we wait for an opportunity to further develop the plan. Will the management give us a chance to prove that our brotherhood can be an asset rather than a thing to frown upon as a nuisance? That is the question we have been asked so often in talking co-operation within the brotherhood and the writer is unable to speak for management. What will be the response to our invitation to get off the battlefield and down to the business of making our department, our work and our relationship what it should be?

## Labor Bill Passed by House

WASHINGTON, D. C.

**T**HE railroad labor bill, H. R. 9463, which abolishes the Railroad Labor Board, sets up a board of mediation and provides for boards of adjustment and arbitration for the settlement of railway labor disputes, was passed by the House of Representatives on March 1 by a vote of 381 to 13. Thirty-eight did not vote. The bill now goes to the Senate, which is expected to pass it in practically the same form in which it was acted upon in the House, that is with several unimportant amendments adopted by the committee on interstate and foreign commerce, plus two adopted in the House, where the bill was debated during a large part of four days' sessions.

Strenuous and sometimes stormy efforts were made by a small minority in the House to amend the bill "to protect the public interest" or to put "teeth" in it, although the interest of the public was more often referred to in terms

of rates than in relation to interruptions of transportation by strikes, and many amendments were urged by those who professed to fear that the Interstate Commerce Commission might feel itself too much influenced in its consideration of reasonable rates by the results of an arbitration award or an agreement between railways and their employees for an increase in wages.

#### Hoch Amendment Out of Order

The amendment proposed by Representative Hoch of Kansas, to provide that "nothing in this act shall be construed to preclude the Interstate Commerce Commission from considering the merits of any such arbitration award when the determining freight or passenger rates or other charges," which was supported by eight members of the committee, was defeated without a vote by a ruling that it was out of order as not germane to a bill which has nothing to do with rates. Efforts to accomplish the same purpose by other amendments were also defeated, but most of those who supported them were apparently satisfied by an amendment proposed by Chairman Parker of the committee, providing "that such award shall not be construed to diminish or extinguish any of the powers or duties of the Interstate Commerce Commission under the interstate commerce act as amended," which was adopted by a vote of 180 to 43, as a substitute for an amendment offered by Representative Tincher of Kansas to provide that an arbitration award "shall have no binding power on the Commission."

Several members seemed to think that a too definite sequence might be made to exist between a wage increase and a rate increase because of the provision in the bill requiring a certified copy of an arbitration award to be filed with the Interstate Commerce Commission.

#### Other Amendments Rejected

Representative Garrett of Tennessee offered an amendment going so far as to provide that no action taken under authority of this act "shall be considered by the Interstate Commerce Commission in the adjustment of freight or passenger rates or other charges." This was ruled out of order.

An amendment proposed by Representative Blanton of Texas, giving the commission power on its own motion to suspend the operation of an arbitration award or a wage agreement if of opinion that such an award or agreement is likely to necessitate the substantial readjustment of the rates of any carrier, was also declared out of order. Mr. Blanton said that this amendment was prepared jointly by the national representatives of the American Farm Bureau Federation and the National Grange.

An amendment offered by Representative Williamson of South Dakota providing that neither party shall "take any action which will tend or threaten to interrupt interstate commerce" during the 30 days provided for an investigation by the emergency board to be appointed by the President, was rejected without a record vote, and an amendment by Representative Blanton to give the emergency commission power to compel testimony and the production of books, papers, etc., under subpoena was defeated 199 to 15.

A motion to recommit this bill with instructions to include the amendment was defeated 292 to 16. Another Blanton amendment to make a strike unlawful after the appointment of the emergency commission was defeated in various forms by votes of 156 to 2, 120 to 1, and 173 to 1.

An amendment proposing to reduce the salaries of members of the board of mediation from \$12,000 to \$10,000 a year was defeated by a vote of 77 to 52.

A committee amendment was adopted authorizing the

appropriation for the expenses of the board of mediation of "such sums as may be necessary" instead of the \$300,000 proposed in the bill.

#### Chairman Parker Gives Argument for Bill

Chairman Parker of the committee, in a speech on the bill in which he said it is not perfect but if it does not work Congress can try again, gave the argument for the bill in part as follows:

"We who were on the Interstate and Foreign Commerce Committee last year went through a rather trying time over railroad labor legislation. Out of that controversy the railroad executives and the railroad employees were convinced they were sure to get some legislation they did not want from Congress, so they were perfectly willing to get together and draw a bill that would come as near as possible to what they wanted, at the same time protecting the public to the fullest extent. They came before us in absolute sincerity, both the executives and the employees, and presented this bill; and before I go any further, let me say, and I want to emphasize the fact there is not one single thing in the interstate commerce law that is abrogated or changed by this bill. Every power that the public has now the public will retain if this bill is passed.

"There are two ways of looking at labor legislation. There are two schools of thought. There is the school that believes in force, which has been tried and tried unsuccessfully in many countries, and never successfully anywhere; and there is also the school that believes these questions must be settled by agreement and by arbitration and by conciliation.

"This bill was drawn on the theory from start to finish of conciliation, arbitration, and agreement, and allow me to say also that the men who drew the bill in two different places have put force into it themselves, not by coercion; it is not put in by the force of Congress, but when the board of arbitration reaches an agreement that is a decree of a court. When one of the adjustment boards reaches an agreement that is also a decree of a court, but it is a decree of a court that these people decide on themselves.

"There has been a lot said about the public not being protected. In 15 (a) of the transportation act I believe there is ample protection for the public. There is certainly as much protection as you have right now. We have now the Railroad Labor Board, which is section 3 of the transportation act. Both the carriers and their employees have said they would not submit one single question to the Labor Board. The Supreme Court has decided that the Labor Board has no power to enforce its decrees; absolutely none. Gentlemen stand here and say that the Labor Board has the right to suspend an agreement on wages. Theoretically that is absolutely true; practically it does not amount to a thing. I might just as well say that a railroad and its employees can not make an agreement on wages as the Labor Board. It would have exactly the same weight.

"The gentlemen who were in Congress when the transportation act was enacted will remember very well how section 3 was written. It is very well to say it is an act of Congress and we considered it, but, as a matter of fact, we did not. The House passed a bill very similar to the bill we are now considering. It went over to the Senate. The Senate took absolutely the other horn of the dilemma, and put in a bill which had force in it, and the conferees wrote section 3 and it was simply brought in and adopted without 10 per cent of the membership of the House knowing anything about it at all. This is really the history of section 3 of the transportation act.

"I want to point out one thing more before I conclude. We are dealing with one of the greatest human problems that civilization knows, and that is the relationship of the employee and the employer. It is one of the most delicate questions we have to contend with, and it seems to me when the employer and the employee come together and say that here is a scheme which will work, it is certainly our duty to give that scheme at least a chance, because if it does not work the next Congress can amend it, and if you want to put teeth in it, as some of the opponents of this bill want to do with reference to this bill, we are not foreclosed from putting teeth in the bill at a future date if it is found necessary.

Many gentlemen are loath to see the Railroad Labor Board abolished. Why? Because there is language in the Railroad Labor Board provision whereby if you will put in just a few extra words and provide certain penalties you can put teeth into the provision. But I do not believe, and I do not think the Congress of the United States believes, we should put compulsory arbitration into effect in this country. This is a free country. This is not a country where we are going to make men work by force when they do not want to work."

# Nickel Plate Application Denied

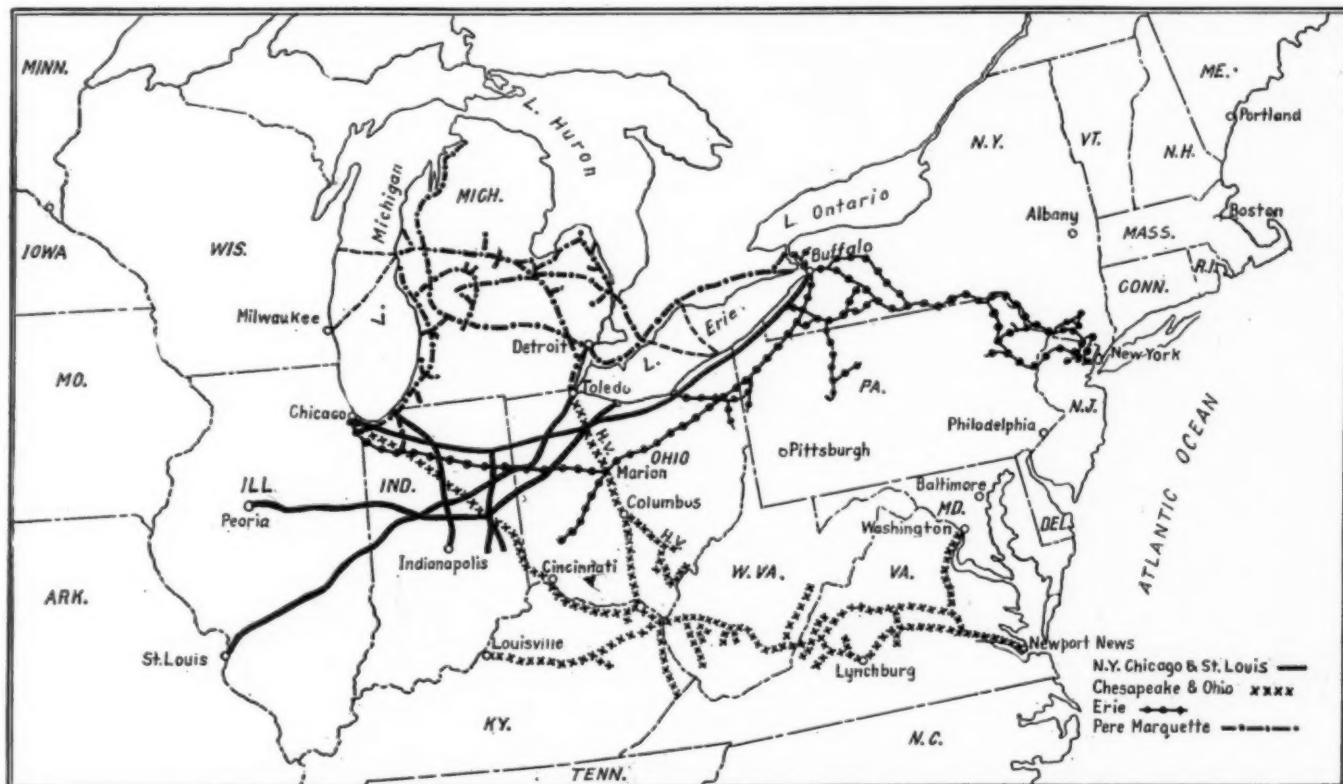
*Commission approved plan from transportation standpoint  
but objects to financial plan*

THE Interstate Commerce Commission on March 2 issued its long-awaited decision on the Van Sweringen-Nickel Plate unification application, finding the proposed acquisition of control with a view to ultimate consolidation of the New York, Chicago & St. Louis Railroad, the Chesapeake & Ohio, the Hocking Valley, the Erie, and the Pere Marquette by the New York, Chicago & St. Louis Railway, a newly organized company controlled by Messrs. O. P. and M. J. Van Sweringen, not to be in the public interest except from a transportation standpoint. The commission generally approved the plan

WASHINGTON, D. C.

Nickel Plate to connect with Chesapeake & Ohio with the Hocking Valley in Ohio was denied without prejudice to its resubmission by the C. & O.

The decision of the commission was reached by a vote of 7 to 1, as Commissioner Lewis dissented and Commissioners Hall, Taylor and Woodlock did not participate in the disposition of the case. Commissioners Aitchison, Campbell, Eastman and McManamy in concurring opinions did not agree with the finding that the plan would be in the public interest from a transportation standpoint. Commissioner Lewis, while joining in the thought that



The Proposed Nickel Plate System

from a transportation standpoint and as a "step along the right lines in carrying out the policy of Congress" in encouraging the formation of a limited number of railway system, but the considerations, terms and conditions of the proposed acquisition of control of the separate companies, by 999-year leases and by exchange of stock of the new Nickel Plate company for that of the separate companies, were found not to be just and reasonable. The financial structure of the new company, including the plan of issuing a large amount of non-voting preferred stock, and the arrangement by which the Van Sweringens would control its management and operation by control of only 32.85 per cent of the voting stock of the present companies, was disapproved and the application was denied. Following this denial the application of the new company for authority to issue its securities in exchange for those of the other companies was denied and the application for a certificate for the construction of a new line by the

"the equities of certain minority stockholders have not received full recognition," did not favor denial of the petition, saying that the proponents will be entirely free to renew their petition after such revision as they may think meets the objections on which denial is based and that it would be better for the commission to retain control of the matter.

Fundamental objections to the financial aspects of the plan were found by the commission and reference is made to the "utter lack of independent and impartial representation of all stockholders of the Chesapeake & Ohio and Hocking Valley when consideration was given to the plan, "and various provisions of the proposed leases were found objectionable."

W. A. Colston, vice-president and general counsel of the Nickel Plate, gave out the following comment on the decision:

"The paramount purpose of the Transportation Act is

the establishment and maintenance of an adequate national transportation system. The commission, in the first nineteen and one-half pages of its mimeographed report, finds that the proposed acquisitions of control are in the public interest as accomplishing this purpose, but it denies the applications upon consideration of purely private arrangements between stockholders, of which the commission's jurisdiction is at least doubtful, and as to which the commission indicates no definite exception. This inconsistency is forcefully pointed out in the first part of the dis-

senting report of Commissioner Lewis. The commission does not even say what changes in the private arrangements between stockholders would be acceptable to it and apparently strikes down without suggested remedy the congressional policy of consolidations in a meritorious case which, according to the commission's own finding, was estimated to result in a saving to the transportation system of the nation of more than \$6,000,000 per year."

An abstract of the report by Commissioner Meyer and of the separate opinions follows:

## The Interstate Commerce Commission Report

Control by the New Company is sought to be acquired (1) under lease for 999 years from the lessor companies of the lines of railways and of other properties, owned by them, respectively, and by assignment from each lessor company of the leases whereby such lessor company now operates existing railways of its system not owned by it, or by sublease thereof from such lessor company, and by the assignment of any and all trackage and operating rights over foreign lines; and (2) by the acquisition of at least a majority of the capital stock of the Chesapeake, the Hocking, the Erie and the Pere Marquette. It will be noted that it is not proposed to acquire any of the capital stock of the Nickel Plate. The proposed lease from the Hocking would run to the Chesapeake and would be assigned to the New Company.

### Proposed Leases

Forms of the proposed leases were submitted with the application. They transfer the right to the use of all of the lessor companies' assets, including, with some exceptions, the holdings of securities of other railroad companies. The Nickel Plate is the only lessor company which retains the right to acquire and operate other railway properties free from the provisions of the leases. The New Company will receive the entire gross income from all leased properties subject to the provisions of the leases. It will be obligated to pay all taxes upon the leased properties or the earnings and income therefrom; all interest charges, all rentals and other charges under all leases to and other contracts of the lessor companies; all expenses and liability from operation and maintenance of the leased properties; all expenses of maintaining the lessor companies' corporate structures enabling them to do whatever may be required by the New Company under the lease or by public authorities; and all current obligations and liabilities.\* \* \* Each lease provides for the return of the leased properties at the expiration or earlier termination of the lease; for accounting between the parties, and for reentry and other remedies in case of default.

With respect to capital obligations of each lessor, the New Company undertakes to pay them for account of the lessor, or provide for them by refunding or otherwise, with the right to reimbursement in securities of the lessor company at par, the New Company to take care of such securities as all others.

### Proposed Stock Exchanges

In addition to control through leases, it is proposed that the New Company shall acquire as much as possible of the outstanding capital stock of each of the lessor companies, with the exception of the Nickel Plate, by the exchange therefor of stock to be issued by the New Company. For this purpose the New Company will issue 6 per cent cumulative preferred stock and common stock, but the preferred stock is to have voting rights only upon certain rather remote contingencies. The terms of the proposed exchange are made part of the leases and require the New Company to issue to the stockholders of the lessor companies, at their option, in exchange for their shares, stock of the New Company at the following ratios:

	New company's shares	
	Preferred	Common
For 100 shares of Chesapeake preferred.....	115	...
Chesapeake common.....	55	55
Hocking common.....	50	50
Erie 1st and 2d preferred.....	50	...
Erie common.....	...	40
Pere Marquette prior preference.....	100	...
Pere Marquette preferred.....	90	...
Pere Marquette common.....	...	85

No proposal is made for an exchange of stock with the stockholders of the Nickel Plate, but it is proposed to issue to the Nickel Plate itself capital stock of the New Company equal in amount and kind to the outstanding capital stock of the Nickel Plate.

The outstanding capital stock of the lessor companies affected by the plan is as follows:

	Preferred	Common
Chesapeake .....	\$12,561,700	\$65,425,725
Hocking .....	...	11,000,000
Erie .....	63,904,400	112,481,900
Pere Marquette.....	23,629,000	45,046,000
Nickel Plate.....	25,865,666	30,104,464
	\$125,960,766	\$264,360,089
Total preferred and common.....		\$390,320,855

### Capitalization

Against this the New Company is to issue \$131,715,120 of preferred stock and \$150,753,523 of common stock. It is also proposed to issue \$50,000 of each class of stock to be sold for cash for organization purposes; and to provide for probable increases in outstanding capital stock of the Chesapeake through the conversion of its bonds amounting to \$38,073,500 it is necessary to reserve an additional amount of \$46,534,278 in stock of the New Company, making a total stock issue of \$329,102,920. Applicants stress the fact that on this basis a reduction of \$103,521,824 in total capitalization will be brought about, but if the Nickel Plate stock which is not to be exchanged for that of the New Company is considered the reduction amounts to \$47,249,694.

The New Company's capitalization, including the obligations of the lessor companies assumed by it, as of December 21, 1924, on the basis outlined, would be as follows:

Preferred stock.....	\$155,032,259
Common stock.....	174,070,661
	\$329,102,920
Funded debt.....	621,802,.92
	\$950,905,812
Total.....	1.9 to 1
Ratio of funded debt to stock.....	1.12 to 1
Ratio of common to preferred stock.....	

Our tentative valuations of all those properties under section 19a has not been completed. A "constructive cost" to December 31, 1924, of the physical railway properties of the new system, after deducting depreciation of equipment at the rate of 4 per cent per annum down to salvage value, has been ascertained by applicant to be \$991,550,474. This "constructive cost" is based on underlying engineering and land reports of our bureau of valuation and subsequent expenditures for additions and betterments as reported to us. Applicants estimate the value of other assets of these companies to be at least \$140,000,000. If our final values should not fall substantially below these tentative estimates, the proposed aggregate capitalization is conservative.

At the outset two questions raised by intervenors representing minority stockholders of the Chesapeake will be disposed of. They first contend that the application for the acquisition of control is not lawfully before us as the application could not be lawfully authorized by a majority of the boards of directors of the Hocking and Chesapeake, or by any meetings of stockholders of these companies so long as substantial control is held by the proponents of the acquisitions. The boards of directors of the several lessor companies have adopted resolutions authorizing and approving the leasing of the properties subject to approval of the stockholders and of governmental authority. Approval has been given by the stockholders at special meetings called to consider the question. But of course the proposed leases have not been executed by the Chesapeake, the Hocking or the New Company. Their approval by the stockholders was conditioned upon consent of the necessary governmental authorities. We have in many cases authorized under paragraph (2) of section 5 acquisition of control by one carrier under leases or other agreements where the contracting parties had directors and officers in common. While this common control must be kept in view in considering other aspects of this case it does not of itself prevent us from exercising our jurisdiction to consider the application on its merits. We are of opinion that the application has been authorized by each of the applicants and is regularly before us for consideration.

### Plan Not a "Consolidation"

The second question raised by interveners is that we are without authority under paragraph (2) of section 5 of the act to approve the application for unified control and operation in the manner proposed, as they contend it is in effect a consolidation of the carriers into a single system for ownership and operation. It seems only necessary to refer to many other cases where we have held that control effected by means similar to those proposed here did not constitute a consolidation into single system for ownership and operation as contemplated in paragraph (2) of section 5. We therefore conclude that we have jurisdiction under paragraph (2) of section 5 to consider this application.

### The Question of Public Interest

We come now to the principal questions in this proceeding: (1) are the proposed acquisitions of control in the public interest; and (2) are the considerations, terms and conditions of the proposed acquisitions of control just and reasonable.

There will be included in the system of the New Company approximately 9,160 miles of road (including trackage rights) in the United States, and 337 miles in the Dominion of Canada. The main lines of the system will extend from the Atlantic ports of New York and Newport News to connections with the principal western, northwestern and southwestern railroads at the important gateways of Chicago, Peoria and St. Louis.

### Advantages from a Transportation Standpoint

The applicants enumerate various advantages to the public through the proposed unification of operations, among which may be mentioned the following: Unification will make possible a fuller utilization of terminals and more rapid, satisfactory and frequent service. Shop facilities will be used to the maximum capacity, as a result of distribution of work to shops best qualified by capacity and equipment to perform it. There are 36 points of interchange between the lines of the lessor companies, at each of which there is joint interchange, inspection and record. The delays incident to this inspection and record will be eliminated and movement through most of the points will be continuous. Consolidation of revenue and distribution of costs will make practicable new and additional through routes. The Pere Marquette car ferries across Lake Michigan operate throughout the year and favorable interchange arrangements are in effect with the northwestern lines at Milwaukee, Manitowoc and Kewaunee. For the first time these routes will be connected by a single system with most of the important cities in central and truck line territories.

Movement of coal from mines on the Chesapeake and the Hocking can be better controlled and expedited, particularly with respect to the return of empties, an important factor in coal movements. In central territory Nickel Plate, Erie and Pere Marquette are the only important carriers which have substantially no bituminous coal production on their lines. Erie has some on its lines in Pennsylvania. On the other hand Chesapeake and Hocking are primarily coal carriers and the unification of all five will result in the new company resting on a border traffic base. The tendency of this will be to increase the financial stability of the entire system which in turn will tend to insure a higher quality of service. The New York Central, Pennsylvania and Baltimore & Ohio systems, the principal competitors of the New Company in central territory, serve large coal areas. Unified operation will result in a better distribution of iron and steel products, automobiles and various other manufactured products produced on the lines of the lessor companies, as they can be handled by a one-line haul throughout an extensive territory. Strengthening of the traffic relations of the Chesapeake will be beneficial to the port of Hampton Roads. One of the most important factors in the unified system will be the movement of traffic over the most economical routes, having regard to density of traffic, congestion at terminals, and grades.

Altogether it is estimated that the proposed unified operation would result in annual savings of more than \$6,000,000. Many, if not all, of the savings are not dependent upon unification in the exact manner proposed here but could be brought about if control were only by stock ownership, or in many cases by inter-company contracts providing for the use of such joint facilities as it is proposed the unified system will establish. But that is not to say that the things mentioned can not more certainly and easily be brought about when the lines are under one management and control.

Without unification it is said that the Chesapeake would have to spend over \$23,000,000 in revising its Chicago division, and the Erie nearly \$32,000,000 in revising its lines between Marion and Meadville and between Kennedy and Steamburg, N. Y., a total of about \$55,000,000. As against this capital expenditure it will be necessary in the near future, in order to provide for the increased traffic, to complete the double-tracking of the Nickel Plate's line between Lima and Brocton, N. Y., at a cost of over \$8,000,000.

Reference is made to the fact that the Erie, Chesapeake, Pere Marquette and Nickel Plate compete to some extent with each other. But we believe that it is unquestionable that the chief and by far the strongest competitors for traffic between Chicago and the west, on the one hand, and New York and Atlantic Seaboard, on the other, are the New York Central, Pennsylvania and Baltimore & Ohio systems. The system proposed would create a fourth powerful competitor of the three systems named, which have long been strongly entrenched in the territory. There has been no serious suggestion that they be disrupted.

### The Commission's Tentative Plan

#### Not an Inflexible Guide

In compliance with the mandate of paragraph (4) of section 5, the commission on August 3, 1921, promulgated a tentative plan for the consolidation of the railway properties of the United States into a limited number of systems. This tentative plan provided for either nine or eight systems in the eastern region according as the New England lines were or were not grouped in a separate system. The principal carriers in those systems were as follows:

1. New York Central and its subsidiaries, except the Lake Erie & Western, Ohio Central Lines and Indiana Harbor Belt; Western Maryland; Rutland; and, alternatively, Boston & Maine, Maine Central and Bangor & Aroostook.
2. Pennsylvania and its subsidiaries, but specifically excluding Norfolk & Western.
3. Baltimore & Ohio; Reading; Jersey Central; Monon; and, alternatively, New Haven.
4. Erie; Delaware & Hudson; Lackawanna; Bessemer & Lake Erie, and Wabash east of Mississippi River.
5. Nickel Plate and properties since consolidated into present Nickel Plate; Lehigh Valley; Wheeling & Lake Erie, and Bessemer & Lake Erie, alternatively with system No. 4.
6. Pere Marquette; Ann Arbor; and Detroit, Toledo & Ironton.
7. New Haven; New York, Ontario & Western; Boston & Maine; Maine Central; and Bangor & Aroostook.
8. Chesapeake & Ohio; Hocking Valley; and Virginian.
9. Norfolk & Western and Ohio Central Lines.

The carriers covered by the present application were placed in four separate systems. Since that time several changes have taken place in the corporate relationship of several of the carriers in the eastern group, with the approval of the commission where necessary, to wit: The New York Central has acquired further control of the Cleveland, Cincinnati, Chicago & St. Louis, and has made the Ohio Central lines an integral part of its system by means of what practically amount to perpetual leases. The Pennsylvania has leased for 999 years several of its most important subsidiaries, and has consolidated others under state laws. The stock of the Central of New Jersey formerly held by the Reading Company has been placed in the hands of trustees appointed by the District Court for the eastern district of Pennsylvania, following the decision of the United States Supreme Court in *United States v. Reading Co.*, 253 U. S. 23. The final disposition of this stock has been deferred pending consolidation proceedings, but by the terms of the decree the court may at any time enter an order for the sale of the stock. New York, Chicago & St. Louis, Lake Erie & Western, and Toledo, St. Louis & Western have been consolidated and now comprise the present Nickel Plate, one of the applicants, which, as before stated, has a one-half interest in the Detroit & Toledo Shore Line. The Wabash has acquired control of the Ann Arbor.

Nearly all of the above transactions were passed upon by us. Most of them were applications under paragraph (2) of section 5, the one under which the present application was filed, or were applications under section 20(a) to effectuate some previous action taken under the state laws. In addition the Norfolk & Western is now before us seeking authority to acquire control of the Virginian and we are advised that the Delaware & Hudson proposes to lease the Buffalo, Rochester & Pittsburg, subject to our approval of course. In many of the instances where we approved acquisition of control, such groupings were contrary to the tentative plan. We have never considered that plan as an inflexible guide to our actions under these provisions of the statute. On the contrary, although consolidations must be in conformity with our complete plan when promulgated, it is evident that it was not the intent of Congress that even the complete plan should be considered as an inflexible guide, as we are empowered at any time after its promulgation, upon our own motion or upon application, to reopen the subject for such changes or modifications as in our judgment will promote the public interest. As we stated at that time, the tentative plan was put forward in order to elicit a full record upon which the plan to be ultimately adopted can rest, and without prejudgment of any matters which may be presented upon that record. Furthermore, we are here dealing with acquisitions, not consolidations, although the latter are the ultimate end sought.

### Defects in Eastern Systems of Tentative Plan

At the hearings upon the tentative plan there was no advocacy of it by any witness who expressed any general opinion concern-

ing the various proposed eastern systems. It was obvious that there was a great disparity in the mileage, property investment and traffic of the several proposed systems. Special criticism was directed against systems Nos. 4 and 5 on the ground that those systems would not have either the financial strength or the traffic advantages which would be necessary to enable them to compete, particularly with the New York Central and Pennsylvania.

The several systems were not sufficiently widely diversified in geography, traffic, and access to important centers of production and distribution to enable them to reach that stable condition of earning capacity which would be necessary if the systems established were to earn substantially the same rate of return.

As before stated, the different parts of the New York Central and Pennsylvania systems have been brought more closely together by various means with our approval. In the case of the Ohio Central lines the tentative plan proposed them as an outlet to the lakes for the Norfolk & Western. It now has such an outlet, as well as a wide western outlet, in connection with the Pennsylvania. It is true that in approving applications under paragraph (2) of section 5 we have generally said that such approval was not to be considered as indicating our conclusion in the matter of consolidation. But on the other hand, for the purposes of dealing with this application, we must consider the New York Central and Pennsylvania as they stand, together with the further fact that the latter still has a large interest in Norfolk & Western.

#### Proposed System Would Compete with Three Large Systems

Applicants contend that their proposal will result in better balanced competition than is possible by the separate components of the system. No important city will be deprived of railroad competition by the proposed unification and, while traffic will be routed so as to avoid congested terminals and otherwise improve and expedite service and reduce operating costs, there is no indication that any existing route will be closed. On the contrary, from stipulations of record affecting weaker connections, a much different spirit has been manifested.

In revenue ton-miles per mile of road operated, the proposed system was third in 1923, being exceeded by the Pennsylvania and Baltimore & Ohio, and first in 1924. In total operating revenues it was third (exceeding Baltimore & Ohio) and in railway operating revenues per mile of road fourth, in 1923 and 1924. In total net railway operating income it was third, and in net railway operating income per mile of line, fourth in 1923 and 1924. In both years it had the smallest average revenue per ton mile, but the greatest average haul per revenue ton. Its total investment in road and equipment was greater than that of Baltimore & Ohio at the end of 1923 and 1924, though less per mile of line than any of the other three systems. In percentage of net railway operating income to investment in road and equipment it ranked third in 1923 (exceeding Pennsylvania) and second in 1924 (New York Central being first.)

The following comparison is limited to the four systems named and shows results for 1924, the investment in road and equipment being as of December 31, 1924:

	Miles of line operated and equipment	Investment in road and equipment	Operating revenues	Net railway operating upon book income investment	Percentage of in- railway come return
Proposed system	9,213	1,228,863,070	340,364,052	59,273,642	4.823
N. Y. C.....	12,093	1,878,762,969	588,171,010	107,988,738	5.748
Pa.....	11,379	2,246,661,561	693,718,881	84,127,203	3.745
B. & O.....	5,316	795,447,338	227,084,805	37,773,163	4.749

#### A Step Toward Carrying Out the Policy of Congress

From the above discussion it seems clear that the proposed unification is a step along the right lines in carrying out the policy of Congress, as expressed in section 5 of the act, of encouraging the formation of a limited number of systems, which, as it affects the eastern territory, outside of New England, and considering the railway situation in that district today, dominated as it is by three long established systems, would result in nearly all of the principal producing and consuming centers of the territory being served by two or more and in many instances by all of the limited number of systems. Mileage, property investment, gross earnings and net railway operating income would be more nearly equalized than is possible in the case of the present number of systems, or even the number proposed in the tentative plan. The systems would more nearly approach an equality of opportunity to serve the public throughout the territory, to provide adequate facilities and to make necessary extensions from time to time with reasonable expectation of securing additional traffic. A greater amount of actual and effective competition in service may be assured by a limited number of well articulated systems than by a greater number of systems less complete.

Other meritorious groupings of these carriers might be proposed but viewing the grouping presented in this application strictly

from a transportation standpoint, we find that the proposed acquisitions of control are in the public interest.

#### Financial Terms and Conditions

Acquisitions of control upon the considerations, terms and conditions proposed were vigorously opposed by interveners, one of whom as a stockholders' committee, representing 143,325 shares of Chesapeake, known as the Scott committee, voted against approval of the proposed lease at a stockholders' meeting held on March 30, 1925. The Hocking interveners represent 11,590 shares of Hocking stock, of approximately 53.5 per cent of the minority stock of the company.

The plan of acquiring control of the lessor companies by lease and stock control heretofore outlined, was proposed by O. P. and M. J. Van Sweringen, hereinafter referred to as the Van Sweringens, under date of August 20, 1924. At that time more than a majority of the members of the boards of directors of the Chesapeake, Hocking and Nickel Plate were common to all three companies, with the same chairman. On August 19, 1924, the board of directors of the Nickel Plate approved the proposal and recommended it to its stockholders. On August 25, 1924, at 2:00 p.m. a directors' meeting of the Chesapeake was held at which similar action was taken. Of the eight directors present and voting for approval of the proposal, five had previously approved it on August 19 as members of the Nickel Plate board. Another director was president and a director of the Chesapeake and Hocking. On August 25, 1924, at 2:20 p.m. (which it will be noted was 20 minutes after the Chesapeake board had been convened) a meeting of the Hocking board of directors was held at which the proposal was approved. Of the nine directors present, seven had just voted in the Chesapeake meeting. On January 20, 1925, the boards of the Chesapeake and Hocking in formal meetings lasting a few minutes approved the proposed leases. At each meeting seven of the nine and ten directors, respectively, voting were also directors of Nickel Plate. On the same day, the articles of incorporation of the New Company were drawn up. All of the incorporators were directors of the Nickel Plate and all except one were directors of the Chesapeake and Hocking.

#### Treatment of Minority Stockholders Criticized

A special meeting of the stockholders of the Chesapeake was held on March 30, 1925. The inspectors of election reported that 850,848 shares were outstanding and entitled to vote, and 658,460 shares present or represented at the meeting. Of this number 506,542 shares were voted by the Deposit Committee named in the proposal and 152,918 shares, of which interveners represented 143,323, against approval of the proposed lease. Previous to this meeting interveners had formally requested permission to prepare a list of the stockholders and only after notice was given of intention to apply for a writ of mandamus was such a list furnished. This was done on March 12, or only two weeks before the special meeting. Aside from the legal rights of stockholders, it seems obvious that it is in the public interest that stockholders' lists be readily available to all stockholders, possibly restricted to those holding a minimum amount of stock, under reasonable rules and regulations prescribed by the board of directors. It is not proper for officials of a railway company to inquire regarding the purposes for which a stockholders list may be desired by a stockholders or group of stockholders. Any other course on the part of officials is in violation of their trust relationship to all the stockholders.

The special meeting of stockholders of the Hocking was held on March 28, 1925, at which 106,555 shares of the total of 110,000 shares were represented. Of these 90,665 shares were voted by the deposit committee in favor of the proposal and 15,890 shares against it. This latter amount represented over 73 per cent of minority stock, that is stock other than that owned by the Chesapeake. The record leaves no doubt that the interests dominating the Chesapeake and Hocking, who as we have pointed out, are those controlling the Nickel Plate, used every weapon at their command to crush all opposition to their predetermined course of action, and that there was an utter lack of independent and impartial representation of all of the stockholders of the Chesapeake and Hocking when consideration was being given by their directors to approval of the plan and the terms of the proposed leases. Requests made by stockholders for relevant and material information were met by evasion or refusal. All but two of the directors of the Chesapeake who voted in favor of the plan were vitally interested in the result from a viewpoint far different from that of mere stockholders in the Chesapeake. Of the two exceptions, one represented certain outside interests which immediately bought amounts of Erie and Pere Marquette, and the other was the president of the Chesapeake whose hands were tied.

The contrast between the manner in which the interests of all the stockholders of the Chesapeake and of the Hocking were represented and the manner in which the interests of stockholders

of Pere Marquette and Erie were protected is striking. In the latter two instances dealings were at arm's length. None of the directors of the Erie or of the Pere Marquette were directors of the Nickel Plate. The board of directors of the Erie had the matter under consideration for months, and the minutes of its several committees as well as those of the board itself show that the stockholders of that company had the benefit of the fullest consideration of the proposal and independent advice as to its terms and conditions, and certain amendments and revisions were insisted upon. The chairman of the board and president did not vote upon the question because he considered that he represented all the stockholders and as some of them objected to the proposal he did not deem it proper to commit himself.

A special committee of three directors of Pere Marquette was appointed to study the proposal and its minutes and those of the board of directors show that the stockholders had the benefit of the fullest consideration, as well as independent advice, which resulted in very substantial changes in the terms and conditions of the proposed lease, the rights and preferences to be enjoyed by stockholders of the New Company, and the ratios of stock exchange, the results of negotiations in the latter respect resulting in an increase in the ratio of exchange from 90 to 100 for prior preference, 85 to 90 for preferred, and 70 to 85 for common stock.

Applicants repeatedly and unreservedly invited the criticism and judgment of the commission regarding every feature of the proposal. However, applicants' original plan of presentation does not appear to have contemplated nearly as complete a showing on the record as the importance of the case and the character of the issues fairly required. Much of applicants' evidence appears to have been prepared after the hearings had begun to meet objections made by interveners and suggestions by the presiding commissioner. Great undertakings like this proposal should be supported by a strong and clear affirmative showing which will fairly meet in advance of rebuttal every substantial objection which reasonably can be anticipated.

#### Van Sweringens Control with Minority Interest

One of the proponents of this plan testified that "if we could not control the properties to the extent necessary to assure continuity of policy we did not want to be interested in them." Through their control of 80 per cent of the voting stock of the Vaness Company, a personal holding corporation, the Van Sweringens now control 54.17 per cent of the voting stock of the Nickel Plate, but they control directly or indirectly only 32.85 per cent of all the voting stock of the companies affected by their proposal. But under their plan they will directly or indirectly control, without purchasing a single additional share, 50.93 per cent of the voting stock of the New Company, and thus will effectually control its management and operation. Assuming conversion of Chesapeake's convertible bonds, the percentages would be 29.43 per cent before and 44.12 per cent after the plan became effective, the latter, under modern conditions, being sufficient to effectively control a large corporation.

This is accomplished principally in two ways. The first is to have the New Company issue preferred stock without voting power, except in certain contingencies not material here, in an amount which compares to the common stock as 1 to 1.12.

There are outstanding 1,000,951 shares of voting preferred stock of the lessor companies. In exchange therefor 687,843 shares of non-voting preferred stock of the New Company will be issued. The New Company will also issue non-voting preferred stock equal in amount to the non-voting preferred stock of the Nickel Plate. Thus the preferred stockholders of Nickel Plate sustain no loss of voting rights, while preferred stockholders of other lessor companies sustain a complete loss of such rights. In addition to that Chesapeake stockholders are offered 55 shares of common and 55 shares of non-voting preferred for each 100 shares of Chesapeake common; while Hocking stockholders, other than the Chesapeake, are offered 50 common and 50 preferred for each 100 shares, thus effecting a further reduction in voting power. It is not proposed to issue any stock of the New Company for Hocking stock owned by Chesapeake, but it is to pass to the New Company under the lease. This stock is pledged to secure some Chesapeake bonds. It is explained that on this account it can not be exchanged for stock of the New Company, but apparently it would not be difficult to provide for such exchange when freed from existing liens, which have at the most only six years to run. It is impossible to determine what, if any, consideration was given to Chesapeake equity in this stock. At the hearing witnesses for applicants stated that in fixing the ratios it was taken into consideration. Upon brief our attention is directed to the premium on Chesapeake's stock in exchange for stock of the New Company as the consideration, but if that is so the amount of the consideration to be paid is either less, on the basis of the amount of Chesapeake stock outstanding at the time of the proposal, or very much greater, on the basis of the amount of Chesapeake stock that will be outstanding after conversion of bonds, than is proposed to be given for stock of the Hocking in the hands of the public.

Adverting to stock control, we have heretofore pointed out that the plan does not contemplate exchange of stock by the Nickel Plate stockholders. They therefore suffer no diminution of their voting power. On the other hand the Nickel Plate, having leased its railroad and received therefor stock of the New Company equal to its own stock, and having exchanged its holdings of Chesapeake and Pere Marquette for stock of the New Company, will in effect be a holding company controlled by the Van Sweringens through their holdings in the Vaness Company. This will give them control of this large transportation system without the necessity of owning an actual majority of even the voting stock, much less all of the stock.

#### Non-Voting Stock Plan Criticized

We can not escape the conclusion that the plan was arranged with the intention of keeping control in the hands of its proponents even though their interest is a minority one in fact. Such an arrangement is not in accord with sound railroad practice. The Nickel Plate is the only railroad of importance in the country in which preferred stockholders do not have the right to vote, and now it is proposed to extend this feature to over \$155,000,000 of new stock of a company comparable with the New York Central, Pennsylvania and Baltimore & Ohio. The common stock of the New Company will not greatly exceed \$174,000,000 out of a total capitalization of over \$950,000,000. We believe it to be self-evident that the public interest requires that the entire body of stockholders of a railroad which is bonded in excess of one half of its investment, and not a powerful few, shall be responsible for its management. This can be done only by giving them the power to control the management. The lethargy of ordinary stockholders in exercising their power to control the management of these large corporations has often been commented on, but nevertheless the power should be in their hands to use as they see fit. It is inimical to the public interest to strip stockholders of their voting power, thus rendering it so much easier to control a great transportation system by a comparatively limited amount of investment.

#### The Trust Agreement

Hovering in the background of this entire question of control in this case is a trust agreement dated January 11, 1924, described by counsel as being in the nature of a last will and testament. Under this agreement the Van Sweringens as owners of 130,000 shares of common (voting) stock of the Vaness Company, and C. L. Bradley and J. R. Nutt, both directors of the Nickel Plate, as owners of 16,250 shares each of the common stock of the Vaness Company, deposited such stock with a trustee, receiving in lieu thereof trust certificates representing "certificates of interest in the common stock" of the Vaness Company proportionate to the number of shares deposited. The stock so deposited constitutes the entire voting stock of the Vaness Company. The certificates issued to Bradley and Nutt and the rights represented thereby are subject to purchase by the Van Sweringens under the terms of an option expressed in the agreement. The certificates are assignable and transferable upon the books of the trustee "subject to the terms and conditions of the agreement." The agreement constitutes and appoints the four gentlemen named "managers" of the trust, which is to continue for 21 years after the death of the last survivor with the right on the part of the survivor to appoint successors to a deceased manager. Without giving further details of this trust agreement, it is sufficient to say that under it the Van Sweringens may divest themselves of all beneficial interest in the Vaness Company stock and still retain voting control of the New Company without direct or indirect ownership of a share of stock therein.

#### Need Directors Who Direct

With respect to the reasonableness of the proposed terms of stock exchange, it is evident that inadequate consideration was given to the terms from the viewpoint of the stockholders of the Chesapeake and Hocking. The president of those two companies was not asked to submit any information or figures bearing on the matter while the plan was under consideration, and had no part in fixing the terms beyond a few general suggestions as to the factors to be considered. He first learned of the proposal from the newspapers and voted to approve it without change. Other directors acted principally on the basis of the balance sheet and income account annexed to the plan and a general inspection of railway and financial manuals and annual reports. They could produce no memoranda or data actually considered by them or by the respective boards although data used by the Erie and Pere Marquette boards were produced. It brings forcibly to mind what we said in *Financial Transactions C., R. I. & P. Ry. Co.*, 36 I.C.C. 43:

This record emphasizes the need of railway directors who actually direct. There are too many passive directors who acquiesce in what is being done without knowledge and without investigation. A director of a railroad is a quasi-public official who occupies a position of trust.

The boards of the Chesapeake and the Hocking appear to have acted as boards of ratification rather than authorization or direction with respect to these matters.

### Ratios of Stock Exchange Not

#### Shown to Be Just and Reasonable

It is obvious that all of the many elements to be taken into consideration were not so considered when the proposal was being drawn up or else the employment of experts after the commencement of the hearing to compile, adjust and compare earnings, property values, book values, and the like would have been largely unnecessary. The information would have been available at the opening of the hearing. Without going into further details it is sufficient to say that whatever test applicants have used in trying to sustain the predetermined ratios they have not sustained the burden of showing that the ratios are just and reasonable as between the stockholders of the respective lessor companies. The traffic of the Chesapeake and Hocking has increased greatly year by year, and together these two roads now constitute one of the most efficient coal transportation machines in the country and undoubtedly would constitute the backbone of the proposed system. The Hocking earned on its common stock \$16.50 per share in 1923 and \$24 per share in 1924, but dividends of only \$4 per share were paid in each year. The Chesapeake had net income, including its equity in Hocking income, equivalent to \$12.93 per share of common stock in 1923 and \$19.26 in 1924 but dividends of only \$4 were paid each year. Applicants refer to the "judgment of the market place" but it seems only necessary to refer to the prices on the New York Stock Exchange on August 8, 1924, when the proposal was announced, April 17, 1925, ten days after the hearings began, and December 12, 1925. The latter quotations are not of record but we believe we are justified in making note of the prices.

	Aug. 8, 1924	Apr. 17, 1925	Dec. 12, 1925
Nickel Plate common.....	110 $\frac{1}{2}$	126 $\frac{3}{4}$	178
Chesapeake common.....	90 $\frac{1}{2}$	91 $\frac{1}{2}$	122

But aside from what has been previously stated, there is another matter which renders it impossible on this record to approve these ratios. We refer to the inclusion of the anthracite coal properties of the Erie. The record is confusing and vague as to their value, and renders it impossible to reach a definite conclusion as to what ratios would be fair.

### Inclusion of Erie Anthracite Properties Objected To

Section 20a, under which application is made to issue securities, provides that we can make an order authorizing proposed issues of securities or assumption of liability only if we find (a) that the issue or assumption is for some lawful object within the corporate purposes of the applicant and compatible with the public interest, which is necessary or appropriate for or consistent with the proper performance by the carrier of service to the public as a common carrier, and which will not impair its ability to perform that service, and (b) is reasonably necessary and appropriate for such purpose. Applicants have made no such showing as to the inclusion of these anthracite properties in the proposed new system. Furthermore the federal courts in several instances have compelled the complete separation of common carriers and their anthracite coal properties.

The New Company does not intend to operate several subsidiaries of the Erie system, said to be unprofitable, although its stockholders in those companies are to be taken over. These subsidiaries have been integral parts of the Erie system for many years and they can not be sloughed off except on a proper affirmative showing. All show corporate deficits as of December 31, 1924, and Erie's assets are distorted to the extent of over \$5,000,000 representing "traffic and car service balances" and "miscellaneous accounts receivable" due from subsidiaries.

The provisions of the leases dealing with the rights of non-assenting stockholders of the lessor companies, other than the Nickel Plate, appear to be designed to coerce all the stockholders into exchanging their stock for that of the New Company upon the terms proposed. The options given them are largely illusory.

### Proper Ratios of Exchange Not

#### for Commission to Prescribe

Applicants concede not only that we have jurisdiction to pass upon the reasonableness of the considerations, terms and conditions, but request us, particularly with reference to the ratios of stock exchange, to indicate what in our opinion would be just and reasonable. For the reasons heretofore pointed out, it is impossible upon this record, voluminous as it is, to so find. However, the burden of ascertaining or determining proper ratios of exchange should not be cast upon us. If all the stockholders are impartially represented in the preliminary discussions they

should be able to reach an agreement which can secure the approval of substantially all of the stockholders. If all the stockholders of Chesapeake and Hocking had been represented by independent negotiators the transcript of these hearings would read differently and our findings would be different. The burden is upon applicants to justify the justness and reasonableness of the ratios of exchange. Many similar applications will probably be filed in the future and if all of these applicants like the instant ones, should request us to adjudicate their differences in the commercial aspects of buying and selling railroad properties, the law would probably become unworkable because we can not undertake, at the request of parties, virtually to trade in several hundred thousand miles of railroads and at the same time perform our legitimate duties under the law.

In view of the fundamental objections relating to the financial aspects of applicants' proposals pointed out in this report, we do not deem it necessary to discuss many other matters covered by the record. We have considered the latter in so far as they have any material relation to this proceeding. They include the means by which the present Nickel Plate was brought into being and control secured by the Van Sweringens; how the latter secured control of Chesapeake and Hocking; their personal profits, actual and prospective; various transactions in connection with the Cleveland Union terminal; the Ross employment contract; acquisition by the Nickel Plate of terminal properties near Chicago through the medium of the Calumet trust in which the Vaness Company has 89 per cent of the beneficial interest; and the relations between the Van Sweringens and Union Trust Company of Cleveland, J. P. Morgan & Co., The First National Bank and the Guaranty Trust Company of New York.

We therefore find that the considerations, terms and conditions of the proposed acquisitions of control are not just and reasonable. Aside from the transportation aspect the proposed acquisitions of control upon the considerations, terms and conditions proposed have not been shown to be in the public interest. The application must be denied. This action necessitates similar disposition of the application for authority to issue securities.

### Short Lines

The American Short Line Railroad Association and certain individual carriers intervened for the purpose of securing proper recognition of the interests of short lines connecting with the lines of the lessor companies should the proposed acquisitions be approved. In view of our denial of the applications it will be unnecessary to deal with those interveners. But the importance of the problem of the short lines in their relation to this subject cannot be too strongly emphasized. One of the chief criticisms of the unifications which have been proposed or suggested has been that certain of them do not embrace related weak lines, although the union of the weak with the strong lines is one of the ends which Congress apparently had most definitely in mind. When these unifications are being considered the problem of the short lines whose property in the public interest should be included in the systems proposed cannot be overlooked if it is possible to include them upon reasonable terms. Every applicant should assume the burden of making reasonable provision in its plan for the possible incorporation of every connecting short line now in operation in the territory covered or to be covered by the proposed grouping or unification.

### The Proposed New Line

With respect to the application in F.D. No. 4643 the record is convincing that the construction of the proposed new line between Gregg and Valley Crossing is necessary to take care of the growing traffic of the Chesapeake. Most of the preliminary work has been done by the Chesapeake and it is amply able to finance the construction. The application of the New Company will be denied without prejudice to resubmission by the Chesapeake.

An appropriate order will be entered.

Commissioners Hall, Woodlock, and Taylor did not participate in the disposition of this case.

### Separate Opinions

EASTMAN, Chairman, concurring:

With the result reached, namely, the denial of the application, I am quite in accord. I am also in accord with the finding that "the proposed acquisitions of control upon the consideration, terms and conditions proposed have not been shown to be in the public interest," and with what is said in support of this finding. I am not in accord with the finding that the proposed plan of unification does not involve the consolidation of the carriers into a single system for ownership and operation and that it contemplates merely acquisitions of control which we have jurisdiction to approve under paragraph (2) of section 5 of the act. In dissent from this finding I am authorized to say

that I am joined by Commissioners Campbell and McManamy. Nor am I in accord with the finding that from a transportation standpoint the "proposed acquisitions of control are in the public interest." In my judgment the evidence falls short of establishing that fact. In this view I am authorized to say that I am joined by Commissioner McManamy.

### Commissioner Aitchison

AITCHISON, *Commissioner*, concurring:

With the finding in the foregoing report that the financial plan presented as a means of carrying out the acquisition of control is not reasonable, and is not in the public interest, I am in accord. The dismissal of the application for approval of acquisition necessarily follows this conclusion. But from the transportation standpoint I would find that the present record establishes that it is not in the public interest that the Chesapeake and Ohio and the Hocking Valley should be taken with the other railroads involved under common control by the New Nickel Plate Company. Commissioner Campbell joins me in the foregoing expression. I concur in the report and order, qualified as herein stated.

### Commissioner Lewis

LEWIS, *Commissioner*, dissenting:

After much analysis the commission, in dealing with the question of public interest, finds that it would be served by the consolidation proposed. But private interest and what is found to be defects in the financial plan block the way and the petition is denied. I concur in the finding that the public interest as declared by Congress would be served. I further join in the thought that the equities of certain minority stockholders have not received full recognition. I do not, however, favor denial of the petition.

There certainly arise grave doubts as to whether this administrative body, having at most only quasi-judicial power, should attempt to set itself up as a court of equity to pass on various individual claims that arise in consolidation proceedings. But this body is competent and equipped to appraise, and to indicate what it would consider to be "just and reasonable terms and conditions" even as between various groups of security holders. It would certainly be within its scope of its proper activity to indicate what would bring the proposal, found to be in the public interest, into line for its approval.

The presumption is created that if the terms and conditions and financial structure are revised to a satisfactory state not indicated, the proposed consolidation will be approved. There are, however, left a number of issues which were raised and are not passed on. Would they rise to such proportions as to block approval? Among these is the allegation of a community of interest between the Van Sweringens and the New York Central and various banking houses and trust companies, a line of attack vigorously prosecuted for months through the Cleveland Union Terminal and many other companies touched not only by the Van Sweringens personally but also by the Vaness Company. The record on this one issue is very ample and it seems to me that we should make a clear cut finding on this vital matter. Inasmuch as it is found that the proposed new system would be a worthy competitor of the New York Central as well as of the Pennsylvania and Baltimore & Ohio systems, there is an implied failure to connect it up with the New York Central interest, but this is not clearly or affirmatively found.

It is well established in our own minds that the doctrine of *stare decisis* does not prevail in our procedure. Proponents of the consolidation will be entirely free to renew their petition after such revision as they may think meets the objections on which denial is based. It would, however, be much better, it seems to me, for us to retain control of the matter and to lead the way to the realization of those things which we find meet the definitions of public interest set up by Congress in its declaration of a national railroad policy.

### APPENDIX

#### PERCENTAGE OF VOTING STOCK OF CONSTITUENT COMPANIES CONTROLLED BY O. P. AND M. J. VAN SWERINGEN

(Before Conversion of C. & O. Bonds.)

	Total shares	Owned by	Shares	Per cent
Chesapeake & Ohio, common	654,147	N. P. R. R.... Vaness Co.....	155,000 174,800	23.69 26.72
			329,800	50.41
Preferred .....	125,617			
Total .....	779,764		329,800	42.29
Erie Railroad, common....	1,124,819	Vaness Co.....	387,000	34.40
First preferred.....	479,044	Vaness Co.....	24,700	5.15
Second preferred.....	160,000	Vaness Co.....	52,600	32.87
Total .....	1,763,863		464,300	26.33

	Total shares	Owned by	Shares	cent Per
Pere Marquette, common...	450,460	N. P. R. R.... Vaness Co.....	120,000 30,000	26.64 6.66
			150,000	33.30
Prior: Preferred .....	112,000			
Preferred .....	124,290			
Total .....	686,750		150,000	21.8
N. Y., C. & St. L., common	304,064	Vaness Co.....	164,000	54.17
Preferred .....	258,656		No Voting Power	
	562,720		164,700	54.17
Hocking Valley, common...	109,995	C. & O. Ry.....	88,379	80.35
Total outstanding voting stock, eliminating: Non-voting Nickel Plate stock .....	3,644,436		1,197,179	32.85
<b>SUMMARY</b>				
Nickel Plate owns: C. & O. common.....		Shares		Per cent
P. M. common.....		155,000 120,000		4.25 3.29
		.....		7.54
Vaness Company owns: C. & O. common.....		174,800		4.80
Erie, common.....		387,000		10.62
First preferred.....		24,700		.68
Second preferred.....		52,600		1.44
P. M. common.....		30,000		.82
N. P. common.....		164,700		4.52
		.....		22.88
C. & O. owns: H. V. common.....		88,379		2.43
		.....		32.85

#### PERCENTAGE OF VOTING STOCK OF NEW COMPANY PROPOSED TO BE CONTROLLED BY O. P. & M. J. VAN SWERINGEN

	Preferred	Per cent	Common	Per cent	Total
Proposed issue of new stock.	1,317,988	100.00	1,507,472	100.00	2,824,560
Nickel Plate will receive on account of stock outstanding .....	258,656	19.64	304,064	20.17	562,720
On account of exchange of: C. & O. common.....	85,250	6.47	85,250	5.65	170,500
P. M. common.....			102,000	6.77	102,000
Total .....	343,906	26.11	491,314	32.59	735,220
Vaness Corp. will receive on account of exchange of: C. & O. common.....	96,140	7.30	96,140	6.38	192,280
P. M. common.....	.....	.....	25,500	1.69	25,500
Erie common.....	12,350	.94	154,800	10.27	154,800
First (preferred).....	26,300	1.99	.....	.....	12,350
Second (preferred).....			.....	.....	26,300
Total .....	134,790	10.23	276,440	18.34	411,230
Total .....	478,696	36.34	767,754	50.93	1,146,450

Vaness Company owns 54.17 per cent of the voting stock of Nickel Plate.  
O. P. & M. J. Van Sweringen own 80 per cent of the voting stock of the Vaness Company.

## Pennsylvania to Build Eight Electric Locomotives

**S**IX electric passenger locomotives and two electric switching locomotives are to be built by the Pennsylvania. Contracts for the motive machinery, controls and other electrical equipment have been awarded to the Westinghouse Electric & Manufacturing Company. This equipment will be shipped to the Juniata shops of the Pennsylvania System at Altoona, where the entire group of eight locomotives are to be built.

The six passenger locomotives with a continuous rating of 3730 horsepower each will be put into operation on the New York division hauling heavy passenger trains between the Pennsylvania Terminal in New York City and Manhattan Transfer. These locomotives are in addition to two others of a similar type placed in service at Manhattan Transfer in 1924. The locomotives were designed by the engineering staff of the motive power de-

partment, Pennsylvania Railroad, under the personal direction of its chief, J. T. Wallis. When delivered and ready for service, each locomotive will weigh approximately 400,000 pounds and will have a total length of 68 feet. The passenger locomotives have a 2-8-2 wheel arrangement with the so-called "Steeple" type cab construction. The motors are arranged two per jack shaft, and are mounted outside, and at either end, of the driving wheelbase. Each jack shaft serves two pairs of drivers, the latter of which are 80 in. in diameter. The connection between the motors and the jack shaft is by means of pinions and flexible gears. The gear ratio of the locomo-

market 275,000 shares of the common stock of the Chicago, Rock Island & Pacific, on the understanding that I would recommend to our executive committee the investment of approximately \$10,000,000 at cost, being about two-thirds of the entire purchase. The purchase of these 275,000 shares was completed on January 19, 1926, and the executive committee on January 20, 1926, authorized the purchase from Speyer & Co., and J. & W. Seligman & Co., of 183,333½ shares out of the 275,000 shares of said stock which the bankers had purchased at the average cost of said shares and interest, paying the bankers \$1.25 per share for their services.



One of the Pennsylvania Type L-5 Locomotives Used in the New York Terminal. The New Locomotives Will Be of This Type

tive will permit a sustained speed of 70 miles an hour.

The two electrical switching locomotives are of the so-called double-cab type for general yard work, of which quite a number already have been ordered.

## Rock Island - Frisco Unification Deferred

WASHINGTON, D. C.

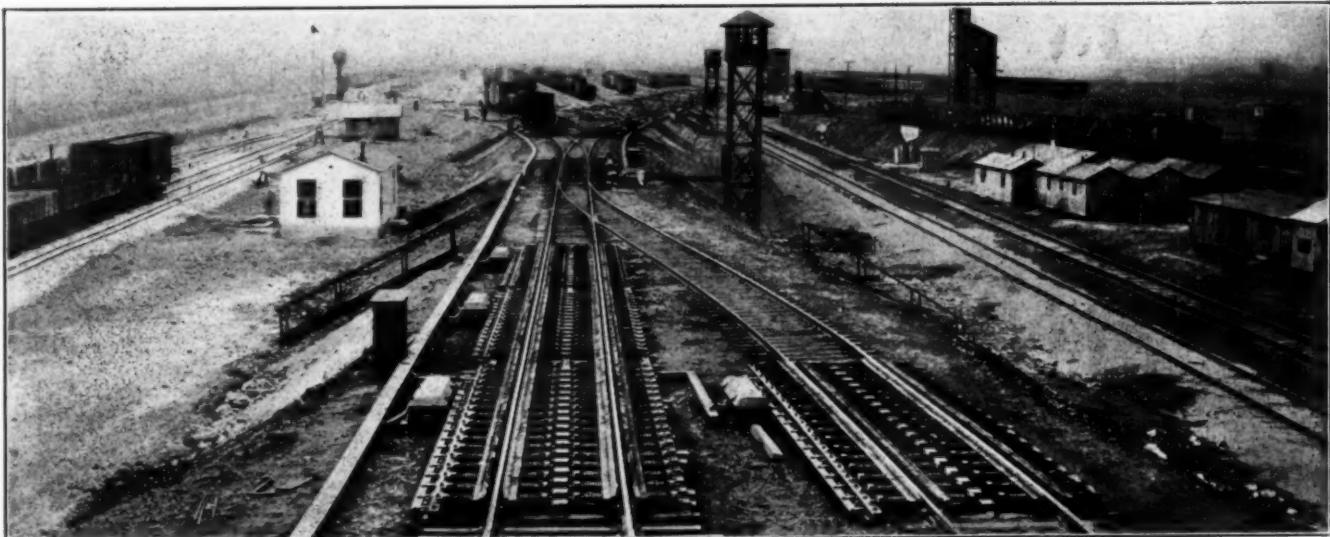
**E**UGENE N. BROWN, chairman of the board of the St. Louis-San Francisco, testified at a hearing on March 1 before Examiner C. V. Burnside of the Interstate Commerce Commission on the application of himself, J. Hirschmann and J. M. Kurn, directors of the Frisco, to hold positions also as directors of the Chicago, Rock Island & Pacific.

"For some time we have been studying the conditions in the territory served by the Frisco and the surrounding country to determine with what other railway this company could best be combined," said Mr. Brown. "In view of the highly competitive systems already formed and being formed in the Southwest, it seemed to us essential that the Frisco should have at least some assurance of co-operation with another railroad, through which it could secure outlets to the Gulf of Mexico, the Mexican frontier, and to the West. In 1923 the Frisco attempted to secure an outlet to the Gulf and the Mexican frontier through acquisition of the International-Great Northern, which did not meet with favor and failed to secure the approval of the Interstate Commerce Commission. After careful study we concluded that this protection could best be secured by acquiring a controlling interest in the Chicago, Rock Island & Pacific. I therefore, on December 14, 1925, entered into arrangements with Messrs. Speyer & Co., and J. & W. Seligman & Co., to purchase in the open

"We understand that the Interstate Commerce Commission has asked to be relieved from its present duty of adopting a complete plan of consolidations to which all future consolidations must conform, with the recommendation that voluntary consolidations be permitted, under the guidance of the Interstate Commerce Commission.

"Until this situation is clarified by action of Congress and by the decision of the commission in the pending Nickel Plate proceeding we think it best to defer submitting to the Interstate Commerce Commission any plan for extending the Frisco interest in the Rock Island and for unification of the two properties. The stock of the Rock Island which has been purchased constitutes about 14 per cent of the outstanding stock; accordingly the Frisco does not contemplate any application under subdivision 2 of section 5 of the interstate commerce act at this time. An examination of the maps of the lines of railroad of the two companies will show clearly that there is no substantial competition between them except for a very limited amount of long-haul business, which is to a great extent competitive also with the Missouri Pacific, Missouri-Kansas-Texas, Kansas City Southern, and St. Louis Southwestern. Between most of the important points reached by both systems, the lines of one system furnish a much more direct route than those of the other. Close co-operation would be of value to both companies and public. The opportunity is desired by the Frisco representatives of becoming familiar with the financial and operating details of the Rock Island Lines, in the protection of the Frisco interest and in order to facilitate a closer study of the problem of unification. We cannot see how the approval of our application will adversely affect the public interest or private interests. On the contrary we believe the Frisco interest in the Rock Island property will materially benefit public and private interests in many ways."

Additional testimony was given by J. M. Kurn, president of the Frisco, by Mr. Hirschmann, and by others, largely of a statistical nature.



*View of Hump Classification Yard at East St. Louis, Ill., Equipped with Retarder System*

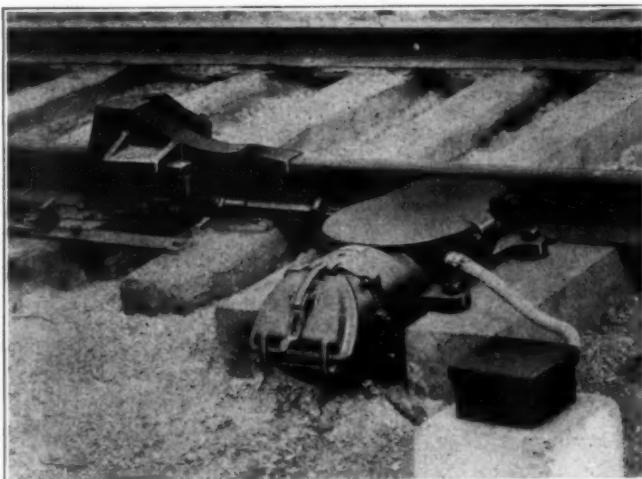
## Illinois Central Installs G. R. S. Electric Car Retarders

*Installation at East St. Louis classification yard includes  
operation of switches and skate machines*

ON February 8, 1926, the Illinois Central placed in service an all-electric car retarder system in its hump classification yard at East St. Louis, Ill. This system, known as the G.R.S. all-electric car retarder system, was manufactured and installed by the General

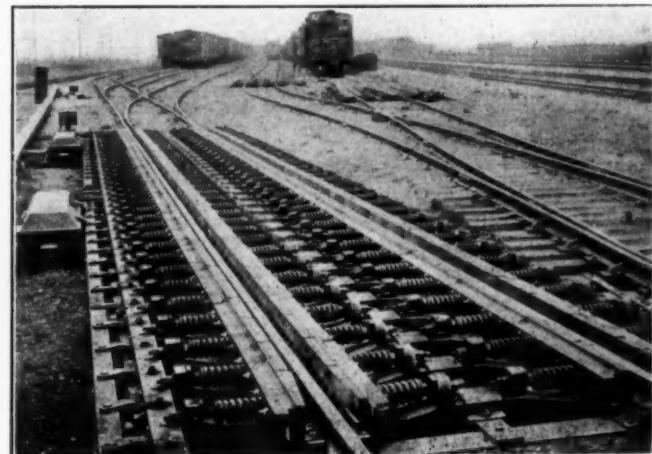
system to be installed in America and the first all-electric one.

The East St. Louis hump was reconstructed especially for a power-operated retarder system. This change involved the expenditure of approximately \$1,300,000, the relocation and construction of six miles of main tracks and 15 miles of side tracks. A conservative estimate shows that an annual saving of \$160,000 should be



*Electrically Operated Skate Placing Machine*

Railway Signal Company, Rochester, N. Y. A similar installation of this electric system is now nearing completion in the Markham southbound hump yard south of Chicago on the Illinois Central. The first power-operated car retarder system for hump yards in America is the one located at Gibson, Ind., on the Indiana Harbor Belt.\* The installation at East St. Louis is the second retarder



*Electric Car Retarder in Two Connected Units*

effected. This saving will approximate 27.5 per cent of the annual operating costs.

The receiving yard is approximately 4,300 ft. long and contains 13 tracks having a total capacity of 1,050 cars. The classification yard is approximately 4,900 ft. long and contains 26 tracks, 20 of which are used for

\*See *Railway Age* for November 15, 1924, and May 9, 1925.

classifying cars, and having a total capacity of 1,975 cars. The grades in this yard are suitable for retarder operation in that cars will not accelerate after leaving the last retarder. A double track thoroughfare is provided for yard and light engines, and north and southbound main tracks on the east and west sides of the yard, respectively.

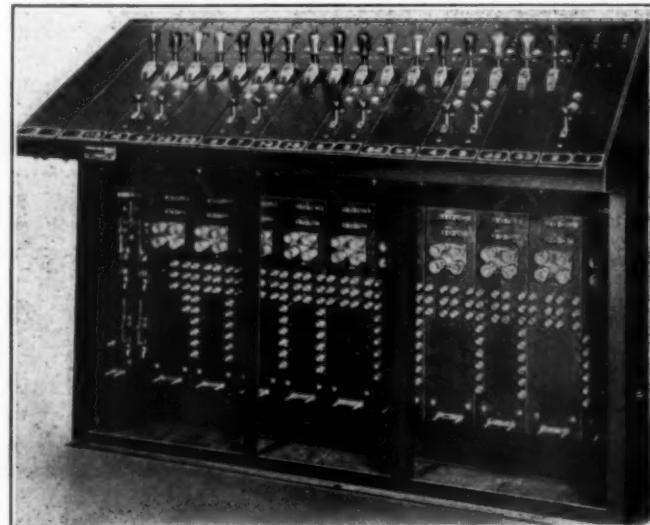
The car retarder system by means of power-operated apparatus enables four men, each located in a suitable tower, to control the speed of cars after they are cut loose at the top of the hump and to control the movement of switches and the operation of skates within the entire yard. The four men perform the combined functions of braking cars by car riders, of throwing switches by switch tenders and of placing skates manually. The speed of cars can be controlled so nicely and their routes established so quickly that they can be uniformly delivered to their proper classification tracks with just sufficient force to couple up with the next car in line without undue shock to cars or contents.

The installation consists of four control machines, each located in a separate tower, controlling a total of 53 retarders, 27 switches and 26 skates which are operated by electric power. Three three-indication and one two-indication color-light signals are provided for the guidance of the hump and trimmer engines. In addition to the retarder system the yard is provided with a three-section mechanical hump by which the height of the apex can be adjusted to compensate for the extremes in weather conditions, and also a 72-ft., 150-ton capacity plate fulcrum automatic track scale, and three 4,000-watt floodlights located on towers 120 ft. high.

#### Method of Operation

All north and southbound trains are made up within this one classification yard. The waybills received from the conductor of the inbound train and the checked list are delivered to the yardmaster's office at the hump where rate clerks check the routing and mark the destination

permanent destinations. As the switch list shows the track number for each car in a train it is a simple matter for each tower operator to set up the route in his terri-

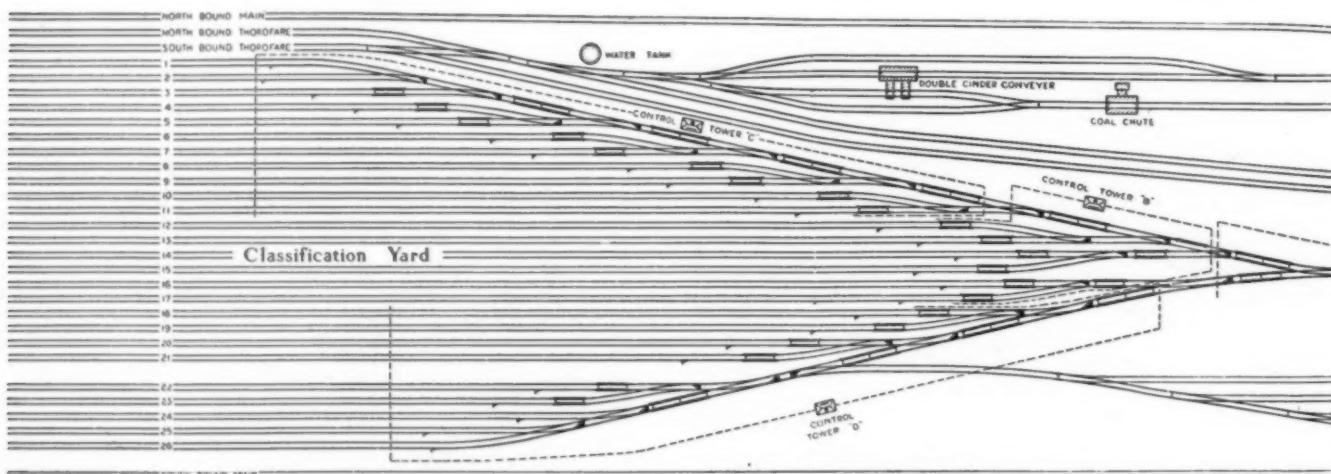


**Electric Control Machine With Lower Doors Open**

tory and govern the speed of the car so that it will roll properly to its correct position on the classification track.

#### The Electric Control Machine

The design of the electric control machine for centralized control of switches and cars at classification yards is suitable for all types of such yards; either flat, gravity or hump yards. The operating machine is shaped somewhat like a bookkeeper's desk with the top sloping downward at an angle of about 30 degrees. The levers for the skates, retarders and switches are mounted in suitable groups on the sloping top of the machine and are so arranged that an operator standing or seated may reach any lever



**Track Plan of Receiving and Classification Yard, Showing Retarder System, East St. Louis, Ill.**

of the cars. From this information a switch list is prepared to enable the hump conductor and retarder operators located in the four towers to classify the cars properly. The list shows the order in which the cars will arrive at the hump, the initial and number of each car, the gross weight in tons and the track to which they are assigned. Changes or corrections in the list are made by means of inter-communicating loud-speaking telephones between the hump conductor and the tower men.

The tracks in the classification yard are assigned to

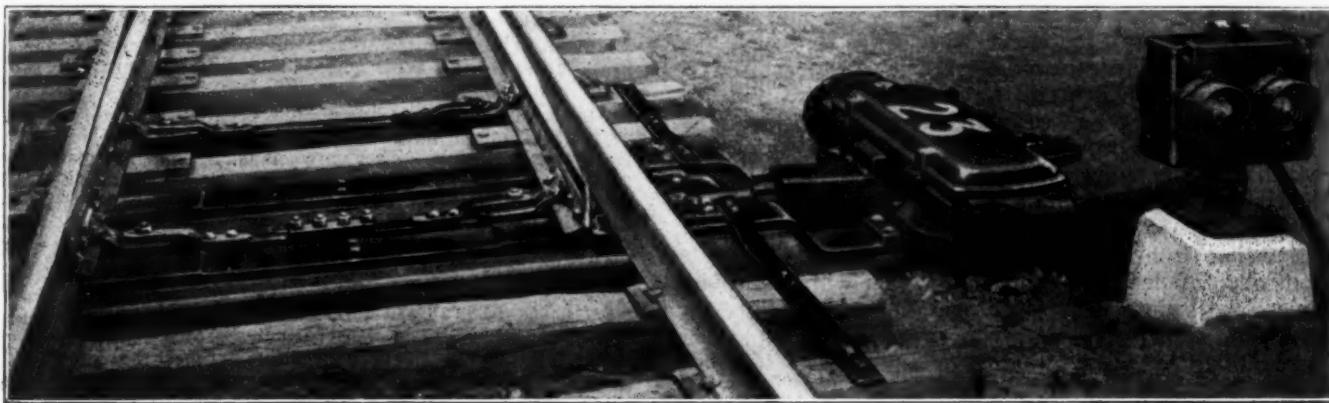
conveniently, while at the same time having in his view all of the functions which he controls. The control levers are located in tiers of three levers each, with two tiers to a panel. The top levers operate the skates on and off the rail, the position of a lever indicating the position of its skate. The middle levers operate the retarders and each has a single light to indicate that the retarder is responding. The bottom levers operate the switches and each has two indication lights; the upper one for "switch normal" when the lever is up, and the lower one for

"switch reversed" when the lever is down. The absence of an indication shows that the switch is not safe for operation and when the position of the lights is not in accord with the lever position that the switch has been run through. With the G.R.S. Model-6 trailable switch machine used in these plants this condition can be rectified without damage to apparatus or delay to yard operation by the operator moving his lever into a position corresponding with the light shown.

The levers for control of retarders operate to six positions; one position being "retarder open," another posi-

installed on curves. One of the primary benefits derived from this design is the reduction of the binding effect from retarder connections when any settlement in track occurs. Individual adjustment are provided for the position of each retarder shoe and the tension of each retarder spring. An overall adjustment is also provided to take up shoe wear.

All spring pressure is placed approximately on the horizontal center of the area where the retarder shoes engage the wheels, thus minimizing any cramping effect in the moving members. The T-cranks operate the cross-

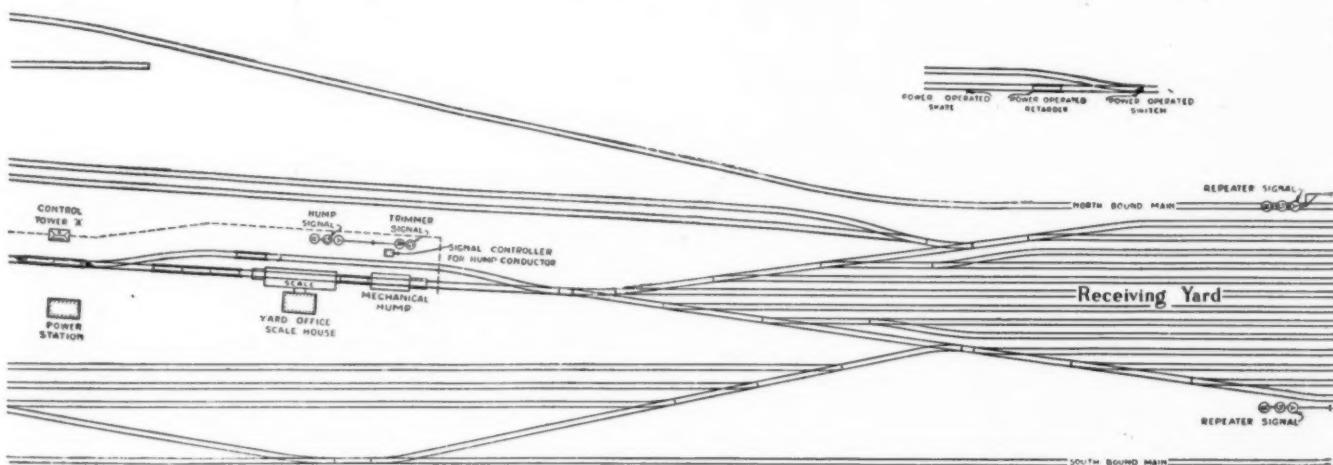


Model-6 Electric Switch Machine and Signal

tion being "power off," while the other positions provide four different degrees of retardation of the cars. On the top of each retarder lever is a push-button which, if depressed, cuts out a resistance in the motor circuit of the retarder, thus increasing the speed and power of the retarder when required. The movement of the lever, either backward or forward, instantly operates the retarder toward the corresponding degree of retardation. These features have much value in the rapid handling of cars. Failure of power leaves available any retardation which was set up at the time.

The G.R.S. car retarder is a power-operated brake

members in such a manner as to produce a parallel motion of the retarder shoes, either forward or reverse. The shoes, therefore, are held in definite positions so that a car, in passing through the retarder, will cause the entire retardation action to be taken up by the individual springs and it will not be transmitted through the connections back to the mechanism. The installation of the retarder does not involve any concrete foundations but only the drilling of ties and the cutting of three ties for the mechanism. This fact, together with the general design of the retarder, makes the installation on the ties, after the track has been laid, practicable.



Track Plan of Receiving and Classification Yard, Showing Retarder System, East St. Louis, Ill.

consisting of a number of shoes suitably mounted and so operated as to grip both sides of the car wheel rim. The shoe-beams are only 3 ft. 8 in. long, joined end to end, thus producing an articulation from each passing wheel. This construction, in combination with other features of the retarder, results in a uniform retardation value throughout its length and avoids the high peaks of pressure which have a tendency to lift a light car. This articulation is also valuable where retarders are

Adjacent retarders can be abutted and so connected as to provide a continuous retardation surface, while allowing each one to be operated independently by its respective mechanism. Separately controlled retarder units are constructed in sections of 3 ft. 8 in., and are furnished in lengths varying from 14 ft. 8 in. to 40 ft. 4 in. for double rail application or the equivalent in rail feet for single rail application.

The retarder is operated by a direct current 230-volt

motor through the medium of suitable gear reduction and operating mechanism. The retarder motor is equipped with a powerful brake which holds the motor stationary. When power is applied to the motor this brake is electromagnetically released.

The switch mechanism is the G.R.S. Model-6, 110-volt d.c. The machine provides for reversibility at any point in the stroke and permits the switch to be run through in an emergency without damage to the switch or the machine and the resetting of the trailable mechanism from the tower lever. A specially designed escapement crank provides that when a switch is run through the points are forced to the other operating position where they are held positively, so that following wheels do not cause continued vibration of the points. The time required for manipulating a switch and receiving the indication is so short that no delay to car movement is occasioned.

Each switch is provided with a two-color-light indicator which has no moving parts and is supported on a separate concrete foundation in order to avoid vibration to the lamps. This indicator has double lenses so that the lights are visible from both directions. Since these lights are controlled by detection contacts, no light will be displayed unless the switch is safe for operation. This light type of switch signal gives an arrestive indication without the necessity of frequent cleaning or painting as is true in connection with targets.

#### The Skate-Placing Machine

It is the practice to locate a skate immediately in the rear of the last retarder on a classification track for the purpose finally of controlling the car in case it for any reason leaves the last retarder at too great a speed. The skate is a shoe which, when in place on the top of the rail, allows the car wheel to roll up on a part of it. Afterwards, the skate slides along the rail, the friction providing the means of stopping the car. The skate is operated on and off the rail by an electric motor similar to that used with the switch machine, only much smaller. The shoe proper is so fastened to the operating mechanism that it may be thrown off and on the rail without disengagement and yet is so attached that the car will pull the skate away without damage to the mechanism.

The East St. Louis power plant is contained in a small one-story building 14½ ft. by 20 ft. and consists of a duplicate motor-generator set with a switchboard. Each motor-generator comprises a 25 k.w., 230-volt d.c. generator driven by a 38 h.p., 440-volt, 3-phase, 60-cycle induction motor.

### Texas Senator Wants States to Authorize New Lines

WASHINGTON, D. C.

**I**N an address in the Senate on February 23 in support of his bill to provide that a certificate of the Interstate Commerce Commission shall not be required for the construction of a railroad wholly within a state, Senator Mayfield of Texas said that in the Transportation Act of 1920 Congress had "defined railroad construction without federal government sanction as a crime and classified individuals so offending as bad as horse-thieves, burglars or bootleggers." His bill would also provide that a certificate from the federal commission for the abandonment of a line within a state should not relieve the carrier from also procuring authority from the state. Senator Mayfield said in part:

It is difficult to understand how the Interstate Commerce Commission reached the conclusion in 1919 that the time was opportune

to put an end, by law, to further speculative or competitive railroad construction.

I do not pause to argue that the commission's interpretation of the act is erroneous. Were that plain we might rely upon the courts or the commission itself to correct the error. The peculiar fact is that the act was so constructed as to leave all "underlying thoughts" to the Interstate Commerce Commission. The act nowhere undertakes to define what shall constitute "public convenience and necessity," and since the commission, at least recommended and urged the enactment of the law, it is difficult to dispute whatever implications the commission attaches to it.

But if the implication attached by the commission to the act is correct, the act abolished the possibility of railroad competition in all those vast areas without railroad service at the time the act was adopted into which, presumably, only one railroad, if any, will be permitted to be constructed or operated, and also in those equally vast areas where but one railroad provided service at the time the act became effective.

Almost instantly throughout the country the railroads have reacted, as might have been expected, to this prohibitory and paralyzing principle. They are claiming that no matter how great or small the volume of traffic in the territories exclusively served by them, whether such territories be fully or only partially developed, whether railroad earnings be slight or exceed the standard return fixed by the commission, they are entitled by law to have and to hold forever exclusive rights in such local territories.

In Texas one railroad proposed to build a branch to a great industrial district in the western suburbs of Dallas, which heretofore was served by but one line; another railroad proposed to build into the Rio Grande Valley, which lately has challenged the world's attention as a district calculated to surpass southern California, heretofore served by but one line; another railroad has sought permission to extend its lines to the newly constructed public waterway at Port Arthur. In each instance the single occupying carrier has held up and is preventing the proposed new development by a claim predicated squarely on the language used by the commission in the Utah Railway case.

Mr. President, any law passed by Congress that admits of such an interpretation is an obnoxious and paralyzing law and ought to be repealed.

It is contended that improvident railroads will be constructed and the Interstate Commerce Commission will not be able to make a system of rates under section 15a of the transportation act that will take care of these improvident roads if paragraph 18, section 1, of the transportation act is repealed, and the people are left free to construct railroads. This idea is purely theoretical and exists more in the imagination than in fact. The money required to construct and equip any substantial amount of railroad mileage is so great, the financing of new construction is so difficult, and the rate of return now established, even on successful ventures is so low as compared with investments in other lines of business, it is absurd to imagine the construction of an amount of new, improvident railroads that would affect rate levels either throughout the country or in any district established by the grouping of railroads.

It costs today about \$50,000 per mile to construct and equip on good standards a new single-track railroad. According to its thirty-ninth annual report, the commission rejected in 1924 proposals to construct new railroads aggregating only 234.03 miles, and it is significant to note that the year 1924 was one of almost unparalleled prosperity, characterized by an abundance of capital seeking investment. If such a thing be possible, let it be imagined that after the passage of Senate bill No. 750 people can be found in the country next year so mentally deficient as to be willing to invest the money necessary to construct 1,000 miles of new, improvident, and unnecessary railroad, with the hope of realizing, after the lapse of several years, a return of 5¾ per cent on their investment. The cost of construction of this mileage would require about \$50,000,000. The ratio of \$50,000,000 to the existing general railroad investment of \$22,173,482,000 is less than one-fourth of 1 per cent. If this mileage and the money invested performed no public service whatever, originated no traffic whatever, and were hung around the neck of the existing transportation system as a dead weight, its influence on the income required to constitute the standard return of 5¾ per cent, fixed by the commission, would be as 5 is to 2,217.

It is submitted that the construction of new competitive railroad mileage, even if improvidently planned and hopelessly unprofitable, does not involve any burden whatever on the general public in the sense that it will be influential on rate levels. Such an undertaking will bring disaster to private investors, whose misfortune we will deplore in the same degree that we condemn their judgment, but similar phenomena are constantly occurring around us everywhere in relation to many other lines of business affected with a quasi public interest.

# Coast Line to Acquire A. B. & A.

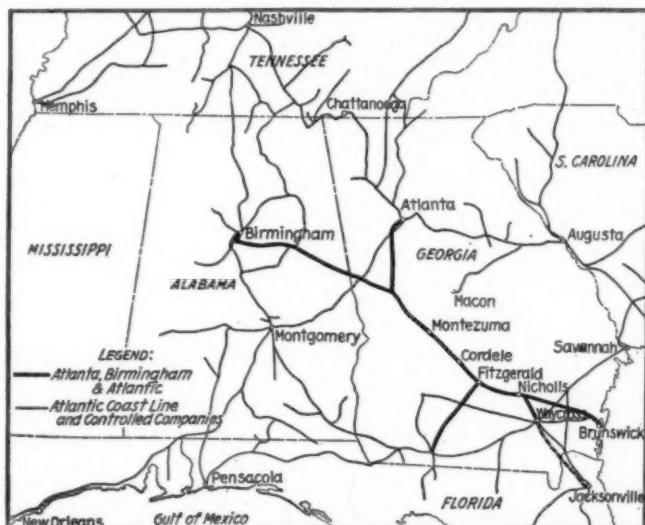
*Birmingham line, unfortunate since inception, has had series of receiverships and reorganizations*

**A**S announced briefly in last week's issue of the *Railway Age*, negotiations have been consummated looking to the acquisition of the Atlanta, Birmingham & Atlantic by the Atlantic Coast Line. The negotiations were conducted with the A. B. & A. bondholders' committee. They are subject to approval of a substantial amount of the A. B. & A. bondholders and to sanction by the Interstate Commerce Commission. The plan calls for a reorganization of the company. In this reorganization the present holders of the bonds will receive new preferred stock to the amount of \$60 for each \$100 of bonds and on this new preferred stock the Coast Line will guarantee 5 per cent dividends. The common stock of the present company will be eliminated and all the common stock of

branches to Waycross, Ga., and Thomasville, and has a total mileage of 640. The present company was organized in 1915 but has been in receivership since February 25, 1921. It has outstanding \$4,090,000 5-per cent first mortgage bonds, maturing in 1934, \$4,543,907 5-per cent non-cumulative income bonds entitled to interest if earned, and \$30,000,000 common stock. The interest on the income bonds was paid up to the interest due December 31, 1919. The first mortgage bonds have been in default since July 1, 1921. Some time ago the bondholders committees for the respective issues agreed that both would share alike in any reorganization. The A. B. & A. has reported a deficit net railway operating income for every year but one since 1917 and has failed consistently to earn its interest. The most pertinent indication of how completely poverty stricken the property is, is given in connection with the equipment trusts issued to finance the 200 box and 150 gondola cars allocated to it by the Railroad Administration. On orders of the court the per diem collected on these cars has to be accounted for separately and all turned over to the government to be applied on interest on the certificates or if there is any excess over interest to be applied on the principal.

## An Ideal Consolidation

Senator Cummins has put himself on record as believing that the value of railway consolidation is to come about not necessarily in economies of management but in protection to the public by keeping in operation the weak lines that otherwise could be no longer maintained in operation as separate entities. Apparently, then, the acquisition of the A. B. & A. by the Coast Line would be almost an ideal merger. It would bring to the assistance of one of the country's poorest railroads the resources of one of the country's richest properties to the great advantage no doubt of the communities served by the unfortunate A. B. & A. It must be understood, however, that the chief trouble with the A. B. & A. is that practically every important community it serves is served also by one, two or more other railroads, such notably as the enterprising Central of Georgia, Southern or Seaboard Air Line. It does not meet any great amount of competition from the Atlantic Coast Line. It will be observed from the map that the A. B. & A. cuts diagonally across Georgia through an area between other groups of Atlantic Coast Line mileage. It would also serve as an additional link between the Coast Line and its controlled property, the Louisville & Nashville, so the Coast Line should find many uses for it. The story of the Atlanta, Birmingham & Atlantic is al-



The Relation of the Atlanta, Birmingham & Atlantic to the Atlantic Coast Line System

the new company will be held by the Coast Line. It is understood that for the present at least the A. B. & A. will be operated separately. There are reports that the Seaboard Air Line also made efforts to acquire the A. B. & A. The rumors have it that the Seaboard offered 50 cents on the dollar for the bonds and that the Seaboard may yet attempt to outbid the Coast Line at the foreclosure sale, but the Seaboard officers when questioned refused to discuss the matter.

The Atlanta, Birmingham & Atlantic extends from Brunswick, Ga., to Birmingham, Ala., and Atlanta with

TABLE I—ATLANTA, BIRMINGHAM & ATLANTIC OPERATING RESULTS, SELECTED ITEMS, 1916 TO 1925

Year	Mileage	Revenue ton-miles	Revenue passenger miles	Revenue per ton- mile, cents	Total operating revenues	Total operat- ing expenses	Net operating revenues	Operating ratio	Net railway operating income	Net after changes
1916.....	640	417,033,000	25,742,000	.603	3,339,840	2,555,181	784,659	76.51	.....	286,899
1917.....	640	522,265,000	29,834,000	.571	3,983,368	3,322,257	661,111	83.40	.....	61,892
1918.....	640	549,452,000	30,846,000	.641	4,703,381	5,038,455	—335,074	107.12	—572,922	133,194*
1919.....	640	458,393,000	34,380,000	.799	4,961,072	5,741,153	—780,081	115.73	—946,458	—14,901*
1920.....	640	521,205,000	34,935,000	.821	4,786,687	5,850,958	—1,064,271	118.80	—11,352,586	—63,821*
1921.....	640	187,896,000	12,577,000	1.333	3,201,634	4,660,666	—1,459,032	145.57	—1,774,159	—2,001,391*
1922.....	640	264,323,000	15,282,000	1.210	4,017,228	4,237,134	—219,906	105.47	—460,653	—693,070*
1923.....	640	328,882,000	18,174,000	1.123	4,638,689	4,568,641	70,048	98.48	—162,492	—396,752*
1924.....	640	358,398,000	16,670,000	1.084	4,810,482	4,389,111	421,371	91.2	107,719	—244,901*
1925.....	640	.....	.....	....	5,448,188	5,028,166	420,022	92.3	—71,501	.....

NOTE—Standard return for operations during federal control, \$480,000.  
\*No allowance made for interest on income bonds.

most an epic of railroad misfortune. It has been a Cinderella among railroads and it is not to be denied that the Coast Line would make a very good prince. The history of the road is simply a recital of receiverships and reorganizations. The inception of the line was the chartering of the Waycross Air Line on October 24, 1887. This company opened a line from Waycross, Ga., to Sessoms, 25 miles, in 1890 and gradually extended it to Fitzgerald. In 1901, the company was reorganized as the Atlantic & Birmingham and under this name the line was extended to Cordele and then to Montezuma. In 1903 it absorbed the Tifton & Northeastern and the Tifton, Thomasville & Gulf which gave it a branch from Fitzgerald to Thomasville. On December 11, 1900, another company known as the Brunswick & Birmingham had been chartered to build a line from Brunswick to Birmingham, Ala. It completed a line from Brunswick to Nicholls on June 1, 1902, building most of it but acquiring part by purchase of the Offerman & Western, Offerman to Nicholls, and the Ocilla & Western. The Brunswick & Birmingham was acquired by the Atlanta & Birmingham on April 1, 1904, and on April 25, 1904, went into receivership. After the merger of the two lines the Atlantic & Birmingham then had a line from Waycross to Montezuma, another from Nicholls to Brunswick and a third from Fitzgerald to Thomasville, totaling 338 miles.

The name Atlanta, Birmingham & Atlantic dates back to 1905 when a company bearing the corporate title of Atlanta, Birmingham & Atlantic Railroad Company was chartered to build an extension of the Atlanta & Birmingham from Montezuma to Birmingham, 241 miles, with a branch to Atlanta, 75 miles. The backers of the new company seem to have acquired extensive terminal properties at Birmingham and Atlanta but failing to induce some railroads to use them had to build a railroad of their own. The company consolidated with the Atlanta & Birmingham on April 12, 1906. It was completed to Atlanta in 1907 and it finally got a line into its Birmingham terminals in 1908. To celebrate its progress it thereupon went into receivership on January 2, 1909.

#### Reorganized Again

Reorganization did not come about until 1915. An attempt was made to reorganize the property following a foreclosure sale in June, 1914, but the purchasers at the sale were unable to carry out their reorganization plan. A second attempt was made in 1915 and the new company known now as the Atlanta, Birmingham & Atlantic Railway Company took possession of the property on January 1, 1916. The new company succeeded to the properties of the Railroad Company and also to those of the hitherto separate Georgia Terminal Company operating the A. B. & A. terminals at Atlanta and the Alabama Terminal Company owning the terminals at Birmingham. In the reorganization \$4,090,000 first mortgage bonds of the old Atlanta & Birmingham remained undisturbed. There were issued \$4,914,547 non-cumulative 5-per cent income bonds and \$30,000,000 common stock. The peculiarity of this reorganization was that the holders of the receivers' certificates received in exchange only income bonds with contingent interest. The unusual procedure was necessitated in part by the necessity of taking care of equipment trust obligations which were paid in cash. The two bond issues noted are the two that the Atlantic Coast Line purposes to exchange for preferred stock at the rate of 60 cents on the dollar.

The company reported net income after interest charges in 1916 and 1917. In 1918 and 1919 the Corporation was sustained by the standard return paid for operation of the property while it was under federal control. The road did not earn for the government the standard return which the

government paid its owners. In fact the railroad operations showed an excess of expenses over revenues in each year from 1918 to 1922. The result was that as soon as the support of the government in the form of the standard return and guarantee was withdrawn the company was again in receivership. More exactly the company succeeded in paying its income bond interest to the end of 1919 and its first mortgage bond interest to the end of 1920. The present receivership started in February, 1921.

TABLE II—COMPARISON OF SELECTED FREIGHT OPERATING STATISTICS

Item	11 Mos. 1925	11 Mos. 1920	Per cent of change	
			Inc.	Dec.
Mileage operated.....	633	638	....	....
Gross ton-miles (thousands).....	1,079,957	1,132,038	....	4.7
Net ton-miles (thousands).....	455,286	563,741	....	19.2
Freight train-miles (thousands).....	1,001	1,115	....	10.2
Freight locomotive-miles (thousands).....	1,079	1,140	....	5.3
Freight car-miles (thousands).....	28,37	29,476	....	2.5
Freight train-hours .....	80,512	97,421	....	17.3
Tons of coal consumed by freight locos.....	108,462	136,816	....	20.8
Car miles per day.....	30.1	33.0	....	8.8
Net tons per loaded car.....	22.9	29.5	....	22.4
Per cent loaded to total car-miles.....	69.3	64.9	6.8	....
Net ton-miles per car day.....	478	632	....	24.3
Freight cars per train.....	29.7	27.4	8.4	....
Gross tons per train.....	1,078	1,015	6.2	....
Net tons per train.....	455	506	....	10.1
Train speed, miles per train-hour.....	12.4	11.4	8.6	....
Gross ton miles per train-hour.....	13,414	11,620	15.4	....
Net ton miles per train-hour.....	5,655	5,787	....	2.4
Lb. coal per 1,000 gross ton-miles.....	170	....	....	....
Loco. miles per loco. day.....	70.2	78.0	....	10.0
Per cent freight locos. unserviceable.....	13.9	20.9	....	7.0
Per cent freight cars unserviceable.....	23.7	8.9	14.8	....

The company has since offered no promise whatever of improvement. Serious suggestions have been made that the property ought to be junked but it would appear that if the Coast Line can take it over this would be a much happier solution of a very difficult situation.

#### Reasons for Road's Failure

The trouble with the Atlanta, Birmingham & Atlantic seems to be that it serves a region of rather light traffic possibilities. This might be overcome if it were used as a bridge line by other railroads, but unfortunately the other railroads seem to have lines for their own which they prefer to use. The road has good terminals at Atlanta and Birmingham as well as a belt railway at Brunswick. Professor Ripley has pointed out that it acquired the terminals first in the hope that some other of the larger railroads in this territory would want them but that when the other carriers made other arrangements this left the terminal properties without any railroads so that the A. B. & A. had to be built to furnish the railroad. The company might have been better off had it only built to Jacksonville. This was contemplated but not carried out. Presumably, this is one reason why the road has not received its share of the present expanded traffic into Florida. Professor Ripley has expressed his opinion of the property further by saying, "The road is well-built, modern in every respect, with excellent terminals, comparatively heavy rails (80 lb. for the most part), and with modern steel bridges capable of carrying heavy loads. It is difficult to justify the enterprise originally; and its subsequent bankruptcy and reorganization were the inevitable consequences of the construction of so high-grade a line through a rather thin territory, gridironed in every direction with competing lines." Professor Ripley thought that the A. B. & A. should be taken by the Atlantic Coast Line in consolidation and it was so allocated in the Interstate Commerce Commission's consolidation plan.

The Atlanta, Birmingham & Atlantic originates about two-thirds of its traffic. Its tonnage is divided about as follows: Products of agriculture, 15 per cent; products of mines, 22 per cent; products of forests, 27 per cent, and

manufactures and miscellaneous, 30 per cent. About half of the products of mines is clay, gravel, sand and stone and most of the other half is coal. The road in 1924—1925 figures are not yet available—received revenue per ton-mile of 1.084 cents which was slightly below the average of 1.103 cents for the Southern region. Its trouble is its low traffic density. Thus the net ton-miles per mile of road per day in 1924 totaled 1891 as compared, say, with the Atlantic Coast Line's average of 2,658 or the Seaboard Air Line's average of 2,404. The point to this is that the Coast Line and Seaboard have many branches to bring down their average whereas what there is of the A. B. & A. is mostly main line. The road's average haul is 180 miles.

In 1924 the road had an operating ratio of 91.2 per cent which although high was the lowest since 1917. Its transportation ratio in 1924 was 41.0. The road reported in 1924 a cost per 1,000 gross ton-miles (inclusive of locomotive repairs, engine and crew wages, enginehouse expenses, fuel and other locomotive and train supplies) of \$1.008 whereas for the southern region as a whole the figure was \$0.955.

There are shown in Table II selected items of the operating statistics for the first 11 months of 1925 compared with the first 11 months of 1920. Nothing in the table stands out more than the decrease of 19.2 per cent in the net ton-miles as between the two periods. All the other figures in the table are affected by this and it is all the more striking because it would seem that a road on the edge of Florida should have been able to get more of the lucrative traffic which moved to and from that state in 1925. One thing is certain and that is that the A. B. & A. needs traffic. As part of the Atlantic Coast Line, reaching such strategic points in the Atlantic Coast Line scheme of things as Birmingham, Atlanta and Waycross, it would presumably get it.

## Purchasing Paint Economically

By J. J. Callahan  
Chemist, Boston & Maine

**T**HE value of a paint depends on its durability and its true durability can only be known by observing its service under actual conditions. To a purchaser of large quantities of paint, like a railroad, however, price is a feature of great importance. The chief reason in such an organization for restricting the purchase of supplies to one department is economy, and if economy is to be effected, efforts must be directed to obtaining the desired quality at the lowest cost.

When there are different brands of paint, each to all appearances equally paint, yet varying greatly in price, it is a question of importance to determine how true economy has been secured in a decision. A popular answer to such a question is to rely on reputation. It is the firm belief of the writer, however, after several years of experience with this problem, that the correct answer is to standardize on quality and see that you get it at the best price.

Reputation is a delicate intangible; what is desired in paint is protection from the elements at the lowest cost. To investigate all the foundations for each paint's reputation is a slow procedure. Moreover, it is impracticable and unprofitable because it is expensive and does not show all we wish to know.

Makers or distributors of different brands of paint may be able to produce evidence of reputation, perhaps uniformly good, without in any way diminishing the difficulty of decision and only increasing the confusion. The result is a final selection that is likely to be based purely on price.

In such a case the high price is questioned and so is the low, and other things being equal, the choice often falls to the medium price as being the most reliable.

### Beware of Practical Tests

To avoid uncertainty reliance is often placed upon a practical test conducted in a practical way. As a rule such tests are practical and nothing more. The conclusions drawn from them are largely a matter of mere personal opinion. Their popularity is derived from their simplicity, convenience and inexpensiveness supposedly, the idea being that paint must be purchased and applied, and to test a paint the only extra effort needed over the ordinary routine is that of remote inspection.

A real service test, on the other hand, is a different matter. Details never thought of in the practical test receive serious consideration and the elimination of the personal element is carried far. Such tests, however, are apt to be rather elaborate and anything elaborate is bound to be expensive. That real service tests will show the true durability is beyond dispute but their practicability is open to question.

For the economical purchasing of paint, decisions must be based on some method of determining quality that is not only reliable and practical but also insures uniformity. Even properly conducted service tests will not meet all of these requirements.

Let us assume that a real service test has been conducted in the most approved manner. No detail has been overlooked and expense is of no consequence. In the course of four or five years it will be shown that the particular paint under test is, let us say, satisfactory. Of how much value is this? Is the test in itself sufficient guarantee that future shipments of this paint will be of the same quality? Experience shows that it is not. Something more is needed to insure uniformity. Moreover, the purchaser of paint in large quantities wants to know that he is getting the best value for satisfactory service, before using the paint, not four or five years later.

The main objective of a purchasing department is price and complicated questions of quality are only an added burden. Simplicity of operation is a great reducer of cost and whenever possible the question of quality should be definitely settled previous to actual purchasing operations.

Efforts in this direction are common and attempts are sometimes made to eliminate this question of quality by standardizing on a particular brand of paint. But this is usually a poor procedure for everybody but the manufacturer whose brand has been adopted as standard.

Another policy favors the arrangement whereby standardization is based on a specification and four or five so-called tested brands. This scheme appears to work but actually it falls short of producing the desired economic results.

If we have a specification paint, permitting the advantage of a large competitive market and whose quality is of the best and over which a large measure of control can be exerted, why bother with brand paints over which we have no control, to say nothing of the disadvantage of a restricted market? Furthermore, the purchaser is again confronted with the problem of determining whether true economy has been secured in each shipment of these tested brands.

There is only one practical method for the economical purchase of large quantities of paint and that is by standard specification, supported by efficient laboratory control. It can be successfully applied to the purchase of large quantities of paint used on railroads. The method is sound and it should not be judged, avoided or condemned by the abuses that have been heaped upon it.

## Little Railway Legislation Now Expected

WASHINGTON, D. C.

**W**HILE most predictions as to what Congress will do in the way of new legislation turn out to be incorrect, those as to what it probably will not do contain a large factor of safety, and it is now being said by many observers of actions on Capitol Hill that the prospects for railway legislation at this session will have been pretty well exhausted with the passage of the railway labor bill, which went through the House on Monday and is now on the Senate calendar. The Gooding fourth section bill, however, is expected to pass the Senate without much difficulty in the near future and it is believed that its chances of getting through the House are better at this session than they were at the last, when the bill was in a more drastic form. Predictions of its easy passage through the Senate are based not only on the fact that the Senate passed the bill without much consideration at the last session but also on the fact that the votes of the Senators from the intermountain states who are for the bill count more heavily than do the votes of the Representatives from the same states in the House, where representation is based on population, and a fairly solid block of votes of this kind, added to those of men who on general principles can see no sense in charging less for a long haul than for a short haul, often provides sufficient momentum to pass a bill that would have much harder sledding in the more numerous lower body of Congress.

Congress having passed the tax-reduction bill, which was the principal thing desired of it, and having made some progress with the appropriation bills, there is talk of an early adjournment, possibly some time in May, and Congressional leaders apparently have some disposition to avoid proposed legislation that involves much controversy.

For that reason the chances for consolidation legislation are considered not particularly bright. The administration policy is to encourage voluntary consolidations but Senator Cummins, the principal advocate in Congress of such legislation, has coupled with a three-year period for voluntary consolidations a form of pressure in case sufficient progress has not been made voluntarily in a short period. Also he has got himself at odds with the Interstate Commerce Commission, which wants to let down some of the bars against consolidation but is not so keen about them as to desire the use of legislative force to hasten a big consolidation program. Senator Cummins has particularly shown his resentment of the carefully prepared criticisms of his bill made by Commissioner Hall, who is the commission's specialist on consolidations. Thus, there is a complete lack of co-operation between the legislative and administrative experts on the subject, while there is also a considerable element among the legislators of those who are suspicious of, or find it politically advantageous to oppose, big business combinations of any kind.

Also, the representatives of the railways have criticised many provisions of the Cummins bill and Senator Cummins has asked for time in which to revise it. Meanwhile the subject has not even been considered in the House, which body was more responsible than the Senate for the provisions of the present law. President Coolidge's brief references to consolidation legislation in his message to Congress are believed to fit better with the proposals made by the Interstate Commerce Commission than with the provisions or principles of the Cummins bill, but there are no indications that he is taking any direct interest in the proposed legislation and the commission has no par-

ticular spokesman in the Senate where its draft of a bill has not been introduced by any one.

### Hearings on Consolidation Bill

Hearings before the Senate committee on interstate commerce on Senator Cummins' consolidation bill were brought to a close on February 25 with the testimony of Ben B. Cain, vice-president and general counsel of the American Short Line Railroad Association, and Senator Cummins was given two weeks in which to revise his bill in the light of the testimony, after which it will be reintroduced. Whether additional hearings will then be held remains to be determined. Alfred P. Thom, general counsel of the Association of Railway Executives, asked for an opportunity to be heard if the changes made are such as to render it desirable. Mr. Cain supported the principal features of the Cummins' bill.

The committee then turned its attention aside from railway legislation for a while to take up a bill for the regulation of radio.

### New Bills

The Senate committee on interstate commerce has decided to hold a hearing on March 23 on Senator Pittman's bill, S. 758, to amend section 13 of the interstate commerce act.

Senator Mayfield, of Texas, has introduced a bill, S. 3286, to authorize carriers, with the approval of the Interstate Commerce Commission, to reduce freight rates in emergencies such as earthquake, fire, flood, famine, drought, epidemic, pestilence, or "other calamitous visitation or disaster."

Representative Brand, of Georgia, has introduced a bill, H. R. 9723, to repeal all laws now in force "which infringe upon and impair" the rights of the states to fix freight and passenger rates.

\* \* \* \*



Ewing Galloway

Beginning of New York Central Improvements, Involving New Yards and Electrification, on West Side, Manhattan, New York City, Freight Line

# General News Department

The Interstate Commerce Commission has postponed until July 18 the effective date of its second automatic train control order (January 14, 1924,) in the case of the Reading.

The Interstate Commerce Commission has postponed until July 18 the effective date of its second automatic train control order (January 14, 1924,) in the case of the Atchison, Topeka & Santa Fe.

The New England Railroad Club will hold its 43rd annual meeting at the Copley-Plaza Hotel, Boston, on Tuesday evening, March 9. George A. Richardson, of the Bethlehem Steel Company, will give a lecture, accompanied by motion pictures, illustrating the manufacture of steel cars, both passenger and freight.

The Pacific Railway Club will hold its annual meeting at the Fairmont Hotel, San Francisco, on Thursday evening, March 11. The election of officers will take place at this meeting. The meeting will be preceded by a reception and banquet in honor of R. H. Aishton, president of the American Railway Association.

The combined forces of the purchasing and stores departments of the Bangor & Aroostook gathered at Derby, Me., on February 16 for an inspection of the principal shops and general storehouses of the company, after which they were entertained at a banquet in the company hotel where several of those present, including C. D. Baldwin, purchasing agent, spoke on various phases of the purchasing and stores work. The event is the first of its kind in the history of the road and is expected to become an annual affair.

The speakers at the annual dinner of the American Railway Engineering Association, which will be held at the Congress Hotel, Chicago, on Wednesday evening, March 10, will include E. W. Beatty, president of the Canadian Pacific, who will speak on "The Engineer"; Dudley F. Holtman, of the United States Department of Commerce, who will talk on "What Better Wood Utilization Means to the Railroads," and Rev. Alan P. Shatford, Canon of the Church of St. James the Apostle, Montreal, whose subject will be "Binding the Nations Together."

## Transportation Division Meeting

The annual meeting of the Transportation Division of the American Railway Association will be held at the Hotel Peabody, Memphis, Tenn., on April 15.

## Terminal Engineers to Meet in New York

The Society of Terminal Engineers at its next meeting, to be held in the Engineering Societies' building, New York, on March 9, will hear an illustrated lecture on "The Importance of Terminals in Regional Planning," by H. M. Lewis, executive engineer for the Regional Plan of New York and environs.

## Great Northern Contracts for Electric Power

The Great Northern has contracted with the Puget Sound Power & Light Company of Seattle, Wash., for the supply of all electric power to be used by the railway in the operation of trains over the electrified section of its main line between Wenatchee, Wash., and Skykomish. The power company will at once install all necessary lines and furnish power for the construction of an 8-mile tunnel which the Great Northern is boring through the Cascade mountains between Scenic, Wash., and Berne, as well as for the operation of the electrified section through the present Cascade tunnel. The road will use throughout its electrified section high tension alternating current transmitted by overhead wires, with motor generators on the locomotive creating direct current for the driving motors. The Great Northern will retain ownership of its

present hydro-electric power plant in the Tumwater canyon of the Wenatchee river and use its output, but will turn the plant over to the Puget Sound Power & Light Company to operate.

## C. N. R. Earns 32 Million in 1925

Final figures of the Canadian National for the year ending December 31 last show a big increase in the net earnings over the previous year, those for the year 1925 being \$32,264,414, as compared with \$17,244,251 in 1924.

During the twelve months ending December 31, 1925, the operating ratio was 86.83 per cent, as compared with 92.68 per cent in 1924 and 91.92 per cent in 1923.

The final figures for 1925, as compared with 1924, are:

Operating revenues: 1925, \$244,971,202.61; 1924, \$235,588,182.55; increase, \$9,383,020.06.

Operating expenses: 1925, \$212,706,787.82; 1924, \$218,343,931.07; decrease, \$5,637,143.25.

Net earnings: 1925, \$32,264,414.79; 1924, \$17,244,251.48; increase, \$15,020,163.31.

The progress made by the National system under its present administration is shown by the following comparative figures:

Operating revenues: 1922, \$234,059,025.05; 1923, \$253,135,487.61; 1924, \$235,588,182.55; 1925, \$244,971,202.61.

Net earnings: 1922, \$2,886,711.55; 1923, \$20,430,649.08; 1924, \$17,244,251.48; 1925, \$32,264,414.79.

Operating ratio: 1922, 98.77; 1923, 91.92; 1924, 92.68; 1925, 86.83.

## Proposed Changes in New York Laws

The "Hughes Committee" which, on March 1, presented to the New York legislature an elaborate report recommending the reorganization of the government of the state, proposes that the Public Service Commission, which regulates the steam and electric railroads, gas and electric light plants and telephone and telegraph facilities, shall become a part of the "Department of Public Service" which department also will include the Transit Commission, which regulates transit in New York City. The chairman of the Public Service Commission, by this plan, would become chairman of the new department; of which the "State Division" will have the powers of the present public service commission and the "Metropolitan Division" those of the Transit Commission.

The Hughes Committee recommends that, for the carrying out of the new laws regulating the abolition of grade crossings, the public service commission—or the State Division if the proposed consolidation is adopted—shall continue to have the power of hearing and determining where and in what manner grade crossings shall be eliminated, but that the power of supervision and inspection be transferred to the Department of Public Works and that of audit and allowance of payments to the comptroller.

## Snow Costs B. & M. \$500,000

The big snow storms of February 4 and 10, cost the Boston & Maine upwards of half a million dollars; or 22.1 inches at about \$25,000 for each inch. Snow removal alone amounted to more than \$200,000 and, says the company's statement, it will be several weeks more before the full out-of-pocket charge is known. This last item includes 300 snow plow days, costing \$24,000. The value of the time devoted to this work by highly paid craftsmen and others who had to be sent out to shovel snow can only be estimated.

One of the principal items of expense was the increased payments to other roads (\$1 for each day) for foreign freight cars which the storms have caused to accumulate on the New England lines. The average number of cars on the Boston & Maine's lines increased from 25,000 before the first storm to over 30,000 later in the month, making this cost \$5,000 per day larger than usual, with \$100,000 for the month as a conservative estimate. Increased switching and other expenses and bad teaming conditions aggravated the difficulties. Conditions are still abnormal, and these extra costs will extend well into March, with a possible additional expense of \$100,000.

The extra fuel consumed by locomotives during the storms

involved an expense of \$20,000 and the wages of freight train crews were increased \$20,000 because of the additional time involved in getting over the road. Moreover, the dollars and cents do not take into account the effect of delays in service, which entail undefined losses.

#### Cost of Fuel in 1925

The average cost of coal to the railroads in 1925 was \$2.72 per net ton, as compared with \$3.03 in 1924, according to the Interstate Commerce Commission's monthly statement of the cost of fuel for road locomotives in freight and passenger train service (charged to operating expenses) for Class I roads, not including switching and terminal companies. The cost ranged from \$1.78 in the Pocahontas region to \$4.66 in the New England region. In December the average cost of coal was \$2.63, as compared with \$2.83 in December, 1924. The roads consumed 97,477,842 net tons in 1925, as compared with 97,917,613 in 1924, and the total cost of coal was \$264,747,386, as compared with \$296,790,900 in 1924. The average cost of fuel oil for the year was 3.13 cents per gallon, as compared with 2.78 cents in 1924, and the roads used 65,277,735 gallons, as compared with 58,355,823 in 1924. The total cost of coal and fuel oil for the year was \$330,025,121, as compared with \$355,146,723 in 1924.

#### Hours of Service Report

The Interstate Commerce Commission has issued its annual statistical summary of reports rendered by the railroad companies on the hours of service of trainmen and telegraphers, as required by the law limiting the hours within which these classes may lawfully be kept at work. The report is for the year ending June 30, 1925, with data for comparison with the four years last preceding.

The instances in which employees in train service were on duty more than 16 consecutive hours are shown in Table 1, all of the roads of the country being arranged in one list alphabetically. The total number of instances in which men in train service were thus held on duty more than 16 hours was 18,412. Of these, no less than 1,156 men were on duty more than 24 hours at a time, and this number includes 162 cases of more than 36 hours.

In a second table these instances of overtime work are classified according to the reasons given by the railroads for the train delays which occasioned the excessive hours. The introduction to the report says that "the attention of directing officials of railroads is particularly invited to this table to the end that instances of excess service due to preventable causes may be eliminated."

Table 3 gives data concerning cases where train employees returned to duty without the prescribed period of rest, and data concerning excessive hours by telegraph operators; total 1,487 trainmen, 17,598 telegraphers.

Table 4 gives, by roads, a summary of all instances of excess service both of trainmen and telegraphers for five years. The totals of this table are, for—

1921 .....	67,686	1924 .....	48,222
1922 .....	31,683	1925 .....	37,497
1923 .....	65,413		

The causes of excess service are given as reported by the railroads themselves, so far as practicable.

#### B. & M. to Reclaim Coke from Locomotive Ashes

A plant for reclaiming coke from locomotive ashes is to be constructed by the Boston & Maine at East Somerville, Mass., adjacent to its roundhouse and shops. It is expected that the railroad will be able to obtain in this manner practically all the fuel required for station heating. Present station requirements aggregate approximately 30,000 tons a year.

This project, so far as known the first of its kind by any railroad in this country, will recover from the locomotive waste now dumped into ash heaps unburned coke which tests have shown to average from 33 to 40 per cent of the ash. The Boston & Maine expects to recover approximately 30 per cent by the new process.

This process is an adaptation of one used in the hard coal fields for separating impurities. It is based on the comparative specific gravity, and by means of water flotation the coke is segregated and the cinder residue precipitated.

The new plant will cover an area approximately 30 ft. by 100 ft. It will cost about \$50,000, and will handle 2,000 tons of ashes weekly, from which approximately 600 tons of coke is expected to be reclaimed. The cinders to be handled by the new plant will

be largely those dumped from locomotives in Greater Boston roundhouses and shops, but if the results warrant, the reclamation process may be extended to apply to the ashes from locomotives elsewhere on the system.

#### Railroad Superintendents Select Subjects for Study

At a meeting of the Executive and Advisory committee of the American Association of Railroad Superintendents at St. Louis on January 23, the following subjects were selected for consideration at the thirty-third annual meeting, which will be held at Montreal, Que., on June 15-18.

Committee No. 1—(A) Classification of freight trains. Should the classification of freight trains be maintained at all terminal points where loading is added to the train or should this classification be made at intervals where there are the most suitable facilities and yards for switching trains to avoid excessive delays at small terminal points. (B) Blocking loads to permit quicker handling. Blocking city loads and road loads to permit quicker handling in yards where facilities are such as not to permit quicker handling of a large number of cars. (C) Control of freight car movement in terminals.

Committee No. 2—(A) The best method of determining the most economical train load for a given district or division. (B) Standard, accurate, economical and rapid methods of computing tonnage in trains. (C) The best method of operation of through, local and way-freight trains to bring about the best results in avoiding overtime and securing the most economical handling. (D) The best method of getting co-operation in the various departments that are concerned in train movements.

Committee No. 3—(A) Unnecessary transfer of cars at interchange points and proper disposition of cars having been transferred to prevent reloading. Overcoming the waste that is now occasioned by improper handling of such cars and permitting them to be reloaded. (B) Overcoming the cross-haul movement of empty cars. (C) Elimination of defensive inspection and inspection for safety only. (D) The run-repair or transfer proposition.

Committee No. 4—Manual block rules. These rules are issued by the American Railway Association with a view to providing flexibility to cover operating conditions which may be variable. The thought presents itself that it would be profitable to discuss the desirable practice to meet certain variable conditions, and the importance of strict observance of the manual block rules that are made applicable to the operations in a given district or territory. In connection with this subject it would be desirable to give special consideration to the manner in which Rule 93 (Yard Limit Rule) is observed in manual block and automatic block signal territories.

Committee No. 5—(A) How to increase the daily average mileage per locomotive. (B) Securing greater efficiency from locomotives.

Committee No. 6—What daily data or record enables the superintendent to control his operating expenses most efficiently in keeping with a fluctuating traffic and revenue.

Committee No. 7—(A) The desirability of increasing carload and the influencing factors. (B) Schedule handling of package freight of I.C.L. The handling of this class of freight should be made to compare favorably with express handling, and can be usually done with the study and co-operation of all concerned. First, the delivery by the wholesaler or the shipper at the station in time to get loaded without any chance of layover at the freight house, the cars to be loaded and scheduled so as to go the greatest distance before opening to break bulk, preferably on through freight trains and suitable connections made at junction points with local freights for delivery the following day.

Committee No. 8—When schedules are disarranged, what is the most desirable method to use at terminals in conveying necessary information to the traveling public?

Committee No. 9—Organization in fuel economy campaign.

#### More Criticism of Rouyn Railway

Two or three fiery speeches in the House of Commons at Ottawa and a statement from Sir Henry Thornton, president of the Canadian National, were last week's contributions to the rapidly extending discussion of the contract between a mining company, the Quebec government and the Canadian National for the building of a 45-mile branch line south from the National Transcontinental road at O'Brien to the Rouyn gold field in northwestern Quebec.

Severely censuring the federal government for its part in this deal G. R. Geary, a Conservative and corporation counsel for the city of Toronto, concluded his speech with the following remarks: "The government has now uncovered one of its deeds wherein, to the extent of \$5,000,000, it has allowed public money to be spent without giving parliament an opportunity to discuss the advisability of that expenditure; and this, not because there was any hurry, but solely, apparently, with a view to depriving this House of its proper opportunity for discussion."

George B. Nicholson, Conservative member for Algoma in Northern Ontario, said:

"When you operate a branch line railway connected with any trunk line system, you take into account, first, what the branch line provides and, second, what the trunk line system provides. In every single case the Rouyn Railway gets more than eight times per car mile what the Canadian National Railways get, making quite certain from the start that in the construction of this railway

neither of the guarantors will ever be called upon to put up a single nickel of the guarantee; they have seen to it that no such thing as a deficit can ever occur, even though only one or two cars of freight move each way each day of the year.

Defending the contract Sir Henry Thornton, in a statement issued in Montreal, said:

"The administration of the National System had been watching developments in the Rouyn mining area for two years and became convinced that the establishment of important mining enterprises with resultant railway traffic was assured. The territory, as is well known, is contiguous to the main line of the Transcontinental section of the National System. It became apparent that speedy and definite action was necessary if the interests of the Canadian National Railways were to be protected. Accordingly the decision was made to build a branch line running from the Transcontinental for about 45 miles into this mining field."

"The legal department of the National System, later supported by outside counsel, informed the administration of the National Railways that this course was entirely within the law and unassailable from a legal standpoint. With this assurance, and for the reasons already given, the administration proceeded to interest private capital in the enterprise.

"In order that no time should be lost, the engineering department of the National Railways made the location surveys, and the National System itself took charge of the project until such time as the final financial arrangements could be made. An arrangement was finally consummated with bankers who agreed to open a credit of approximately \$3,000,000 for the Rouyn Railway."

Sir Henry affirmed that, while these financial agreements had been made, thus far no money whatever had been drawn down under the banking credit provided. The question of the utilization of any portion of this credit for campaign fund purposes could, therefore, be at once dismissed as impossible for this reason alone.

## Meetings and Conventions

*The following list gives names of secretaries, dates of next or regular meetings and places of meetings.*

AIR BRAKE ASSOCIATION.—F. M. Nellis, 165 Broadway, New York City. Next convention, May 4-7, 1926, New Orleans, La. Exhibit by Air Brake Association.

AIR BRAKE APPLIANCE ASSOCIATION.—John B. Wright, Westinghouse Air Brake Co., Pittsburgh, Pa. Meeting with Air Brake Association.

AMERICAN ASSOCIATION OF ENGINEERS.—H. Almert, 63 E. Adams St., Chicago. Next convention, June, 1926, Philadelphia, Pa.

AMERICAN ASSOCIATION OF FREIGHT TRAFFIC OFFICERS.—Grant Williams, 1341 Railway Exchange, Chicago.

AMERICAN ASSOCIATION OF GENERAL BAGGAGE AGENTS.—E. L. Duncan, 332 St. Michigan Ave., Chicago. Next meeting, June 1, 1926, Atlantic City, N. J.

AMERICAN ASSOCIATION OF PASSENGER TRAFFIC OFFICERS.—W. C. Hope, C. R. R. of N. J., 143 Liberty St., New York.

AMERICAN ASSOCIATION OF RAILROAD SUPERINTENDENTS.—J. Rothschild, Room 400, Union Station, St. Louis, Mo. Next convention, June 15-18, 1926, Montreal, Quebec, Canada.

AMERICAN ASSOCIATION OF SUPERINTENDENTS OF DINING CARS.—T. E. Welsh, Chicago, North Shore & Milwaukee, Highwood, Ill. Next convention, 1926, Baltimore, Md.

AMERICAN ELECTRIC RAILWAY ASSOCIATION.—J. W. Welsh, 292 Madison Ave., New York. Annual convention, October, 1926.

AMERICAN RAILROAD MASTER TINNERS', COPPERSMITHS' AND PIPE FITTERS' ASSOCIATION.—C. Borcherdt, 202 North Hamilton Ave., Chicago, Ill.

AMERICAN RAILWAY ASSOCIATION.—H. J. Forster, 30 Vesey St., New York, N. Y.

Division I.—Operating—J. C. Caviston, 30 Vesey St., New York. Freight Station Section (including former activities of American Association of Freight Agents).—R. O. Wells, Freight Agent, Illinois Central Railroad, Chicago, Ill.

Medical and Surgical Section.—J. C. Caviston, 30 Vesey St., New York. Next meeting, April 20, 1926, Dallas, Tex.

Protective Section (including former activities of the American Railway Chief Special Agents and Chiefs of Police Association).—J. C. Caviston, 30 Vesey St., New York, N. Y. Annual meeting, June 23-24, 1926, Mount Royal Hotel, Montreal, Canada.

Safety Section.—J. C. Caviston, 30 Vesey St., New York. Next meeting, April 27-29, 1926, Hotel Statler, St. Louis, Mo.

Telegraph and Telephone Section (including former activities of the Association of Railroad Telegraph Superintendents).—W. A. Fairbanks, 30 Vesey St., New York. Next meeting, Sept. 21-23, 1926, Swampscott, Mass.

Division II.—Transportation (including former activities of the Association of Transportation and Car Accounting Officers).—G. W. Covert, 431 South Dearborn St., Chicago, Ill. Next meeting, April, 1926.

Division III.—Traffic, J. Gottschalk, 143 Liberty St., New York. Division IV.—Engineering, E. H. Fritch, 431 South Dearborn St., Chicago, Ill. Annual convention, March 9-11, Congress Hotel, Chicago. Exhibit by National Railway Appliances Association, at Coliseum, March 8-11.

Construction and Maintenance Section.—E. H. Fritch.

Electric Section.—E. H. Fritch.

Signal Section (including former activities of the Railway

Signal Association).—H. S. Balliet, 30 Vesey St., New York, N. Y. Next meeting, March 8-9, 1926, Drake Hotel, Chicago.

Division V.—Mechanical (including former activities of the Master Car Builders' Association and the American Railway Master Mechanics' Association).—V. R. Hawthorne, 431 South Dearborn St., Chicago, Ill. Annual convention, June 9-16, Atlantic City, N. J. Exhibit by Railway Supply Manufacturers' Association.

Equipment Painting Section (including former activities of the Master Car and Locomotive Painters' Association).—V. R. Hawthorne, 431 South Dearborn St., Chicago, Ill. Next meeting, September 21-23, 1926.

Division VI.—Purchasers and Stores (including former activities of the Railway Storekeepers' Association).—W. J. Farrell, 30 Vesey St., New York, N. Y. Next meeting, June 9-11, 1926, Vernon Room, Haddon Hall Hotel, Atlantic City, N. J.

Division VII.—Freight Claims (including former activities of the Freight Claim Association).—Lewis Pilcher, 431 South Dearborn St., Chicago, Ill.

Car Service Division.—C. A. Buch, 17th and H Sts., N. W., Washington, D. C.

AMERICAN RAILWAY BRIDGE AND BUILDING ASSOCIATION.—C. A. Lichty, C. & N. W. Ry., 319 N. Waller Ave., Chicago. Annual convention, October, 1926, Richmond, Va. Exhibit by Bridge and Building Supply Men's Association.

AMERICAN RAILWAY DEVELOPMENT ASSOCIATION.—H. W. Byerly, General Immigration Agent, Northern Pacific, St. Paul, Minn. Annual meeting, June 23-25, 1926, Vancouver, B. C.

AMERICAN RAILWAY ENGINEERING ASSOCIATION.—(Works in co-operation with the American Railway Association Division IV.) E. H. Fritch, 431 South Dearborn St., Chicago. Annual convention, March 9-11, Congress Hotel, Chicago. Exhibit by National Railway Appliances Association, at Coliseum, March 8-11.

AMERICAN RAILWAY MASTER MECHANICS' ASSOCIATION.—(See American Railway Association, Division V.)

AMERICAN RAILWAY TOOL FOREMEN'S ASSOCIATION.—G. G. Macina, C. M. & St. P. Ry., 11402 Calumet Ave., Chicago. Annual convention, September 1-3, 1926, Hotel Sherman, Chicago. Exhibit by Supply Association of the American Railway Tool Foremen's Association.

AMERICAN SHORT LINE RAILROAD ASSOCIATION.—T. F. Whittelsey, 1319-21 F St., N. W., Washington, D. C.

AMERICAN SOCIETY FOR STEEL TREATING.—W. H. Eisenman, 4600 Prospect Ave., Cleveland, Ohio.

AMERICAN SOCIETY FOR TESTING MATERIALS.—C. L. Warwick, 1315 Spruce St., Philadelphia, Pa. Annual meeting, Atlantic City, June 21-25, 1926.

AMERICAN SOCIETY OF CIVIL ENGINEERS.—29 W. 39th St., New York. Regular meetings 1st and 3rd Wednesday in month, except July and August, 33 W. 39th St., New York.

AMERICAN SOCIETY OF MECHANICAL ENGINEERS.—Calvin W. Rice, 29 W. 39th St., New York. Railroad Division, Marion B. Richardson, Associate Mechanical Editor, *Railway Age*, 30 Church St., New York.

AMERICAN TRAIN DISPATCHERS' ASSOCIATION.—C. L. Darling, 10 East Huron St., Chicago, Ill. Biennial convention, July 18, 1927.

AMERICAN WOOD PRESERVES' ASSOCIATION.—E. J. Stocking, 111 West Washington St., Chicago.

ASSOCIATION OF RAILWAY CLAIM AGENTS.—H. D. Morris, District Claim Agent, Northern Pacific Ry., St. Paul, Minn. Annual meeting, May 18-20, 1926, Los Angeles, Calif.

ASSOCIATION OF RAILWAY ELECTRICAL ENGINEERS.—Jos. A. Andreucetti, C. & N. W., Room 411, C. & N. W. Sta., Chicago. Annual meeting, October 27-30, 1926, Chicago. Exhibit by Railway Electrical Supply Manufacturers' Association.

ASSOCIATION OF RAILWAY EXECUTIVES.—Stanley J. Strong, 17th & H Sts., N. W., Washington, D. C.

ASSOCIATION OF RAILWAY SUPPLY MEN.—S. A. Witt, Detroit Lubricator Co., Chicago. Meeting with International Railway General Foremen's Association.

ASSOCIATION OF RAILWAY TELEGRAPH SUPERINTENDENTS.—(See American Railway Association, Division I.)

ASSOCIATION OF TRANSPORTATION AND CAR ACCOUNTING OFFICERS.—(See American Railway Association, Division II.)

BRIDGE AND BUILDING SUPPLY MEN'S ASSOCIATION.—Fred M. Condit, Fairbanks, Morse & Co., Chicago. Meeting with American Railway Bridge and Building Association.

CANADIAN RAILWAY CLUB.—C. R. Crook, 129 Charron St., Montreal, Que.

CAR FOREMEN'S ASSOCIATION OF CHICAGO.—Aaron Kline, 626 North Pine Ave., Chicago. Regular meetings, 2nd Monday in month, except June, July and August, Great Northern Hotel, Chicago.

CAR FOREMEN'S ASSOCIATION OF LOS ANGELES.—J. W. Krause, 514 East Eighth St., Los Angeles, Calif. Regular meetings, second Friday of each month, 514 East Eighth St., Los Angeles.

CAR FOREMEN'S ASSOCIATION OF ST. LOUIS, MO.—R. E. Giger, 721 North 23rd St., East St. Louis, Ill. Meetings, first Tuesday in month at the American Hotel Annex, St. Louis.

CENTRAL RAILWAY CLUB.—Harry D. Vought, 26 Cortlandt St., New York. Regular meetings, 2nd Thursday each month, except June, July, August, Hotel Statler, Buffalo, N. Y.

CHICAGO CLAIM CONFERENCE PERSONAL INJURY SECTION.—F. L. Johnson, Chicago & Alton R. R., 340 Harrison St., Chicago. Meets 12:30 p. m., first Monday each month, Sherman Hotel, Chicago.

CHIEF INTERCHANGE CAR INSPECTORS' AND CAR FOREMEN'S ASSOCIATION.—A. S. Sternberg, Belt Ry. of Chicago, Polk and Dearborn Sts., Chicago.

CHIEF INTERCHANGE CAR INSPECTORS' AND CAR FOREMEN'S SUPPLY MEN'S ASSOCIATION.—Bradley S. Johnson, W. H. Miner, Rookery Bldg., Chicago, Ill. Meeting with Chief Interchange Car Inspectors' and Car Foremen's Association.

CINCINNATI RAILROAD CLUB.—W. C. Cooder, Union Central Bldg., Cincinnati, Ohio. Meetings, 2nd Tuesday in February, May, September and November.

CLEVELAND STEAM RAILWAY CLUB.—F. L. Frericks, 14416 Alder Ave., Cleveland, Ohio. Meetings, first Monday each month, Hotel Cleveland, Public Square, Cleveland.

EASTERN RAILROAD ASSOCIATION.—E. N. Bessling, 614 F St., N. W., Washington, D. C. Annual meeting, May 13, 1926, Railroad Club, New York.

FREIGHT CLAIM ASSOCIATION.—(See American Railway Association, Division VII.)

INTERNATIONAL RAILROAD MASTER BLACKSMITHS' ASSOCIATION.—W. J. Mayer, Michigan Central R. R., Detroit, Mich. Next convention, August 17-19, 1926, Hotel Winton, Cleveland, O. Exhibit by International Railroad Master Blacksmiths' Supply Men's Association.

**INTERNATIONAL RAILROAD MASTER BLACKSMITHS' SUPPLY MEN'S ASSOCIATION.**—Edwin T. Jackman, 710 W. Lake St., Chicago.

**INTERNATIONAL RAILWAY CONGRESS.**—Office of Permanent Commission of the Association, 74 rue du Progrès, Brussels, Belgium. General secretary, P. Ghilain. Next session of the Congress, Spain, 1926.

**INTERNATIONAL RAILWAY FUEL ASSOCIATION.**—J. B. Hutchison, 1809 Capitol Ave., Omaha, Neb. Annual convention, May 11-14, 1926, Hotel Sherman, Chicago. Exhibit by International Railway Supply Men's Association.

**INTERNATIONAL RAILWAY GENERAL FOREMEN'S ASSOCIATION.**—Wm. Hall, 1061 W. Wabasha Ave., Winona, Minn.

**INTERNATIONAL RAILWAY SUPPLY MEN'S ASSOCIATION.**—F. P. Roesch, 1942 McCormick Bldg., Chicago. Earl E. Thulin, assistant secretary, 715 Peoples Gas Bldg., Chicago. Meeting with International Railway Fuel Association.

**MASTER BOILER MAKERS' ASSOCIATION.**—Harry D. Vought, 26 Cortlandt St., New York. Next meeting, May 25-28, 1926, Hotel Statler, Buffalo.

**MASTER CAR AND LOCOMOTIVE PAINTERS' ASSOCIATION.**—(See A. R. A., Div. V.)

**MASTER CAR BUILDERS' ASSOCIATION.**—(See A. R. A., Division V.)

**MOBILE TRAFFIC & TRANSPORTATION CLUB.**—T. C. Schley, 71 Conti St., Mobile, Ala. Regular dinner meetings, 6 p. m., on 2nd Thursday of each month, Cawthon Vineyard, Mobile, Ala.

**NATIONAL ASSOCIATION OF RAILWAY TIE PRODUCERS.**—E. A. Morse, vice-president, Potosi Tie & Lumber Co., St. Louis, Mo. Next convention, 1927, Nashville, Tenn.

**NATIONAL ASSOCIATION OF RAILROAD AND UTILITIES COMMISSIONERS.**—James B. Walker, 49 Lafayette St., New York. Annual convention, November 9, 1926, Asheville, N. C.

**NATIONAL FOREIGN TRADE COUNCIL.**—O. K. Davis, 1 Hanover Square, New York. Annual convention, April 28-30, 1926, Charleston, S. C.

**NATIONAL HIGHWAY TRAFFIC ASSOCIATION.**—Elmer Thompson, 12 East 53rd St., New York.

**NATIONAL RAILWAY APPLIANCES ASSOCIATION.**—C. W. Kelly, 845 South Wabash Ave., Chicago. Annual exhibition, March 8-11, Coliseum, Chicago, at convention of American Railway Engineering Association.

**NATIONAL SAFETY COUNCIL.**—Steam Railroad Section: E. R. Cott, Safety Agent, Hocking Valley Ry., Columbus, Ohio.

**NEW ENGLAND RAILROAD CLUB.**—W. E. Cade, Jr., 683 Atlantic Ave., Boston, Mass. Regular meetings, 2nd Tuesday in month, excepting June, July, August and September, Copley-Plaza Hotel, Boston, Mass.

**NEW YORK RAILROAD CLUB.**—Harry D. Vought, 26 Cortlandt St., New York. Regular meetings, 3rd Friday in month, except June, July and August.

**PACIFIC RAILWAY CLUB.**—W. S. Wollner, 64 Pine St., San Francisco, Cal. Regular meetings, 2d Thursday in month, alternately in San Francisco and Oakland.

**PURCHASES AND STORES DIVISION.**—(See American Railway Association, Division VI.)

**RAILWAY ACCOUNTING OFFICERS' ASSOCIATION.**—E. R. Woodson, 1116 Woodward Building, Washington, D. C. Next annual convention, June 8-11, 1926, Chateau Frontenac, Quebec, Canada.

**RAILWAY BUSINESS ASSOCIATION.**—Frank W. Noxon, 1406 Packard Bldg., Philadelphia, Pa.

**RAILWAY CAR MANUFACTURERS' ASSOCIATION.**—W. C. Tabbert, 61 Broadway, New York.

**RAILWAY CLUB OF PITTSBURGH.**—J. D. Conway, 515 Grandview Ave., Pittsburgh, Pa. Regular meetings, 4th Thursday in each month, except June, July and August, Fort Pitt Hotel, Pittsburgh, Pa.

**RAILWAY DEVELOPMENT ASSOCIATION.**—(See Am. Ry. Development Assn.)

**RAILWAY ELECTRICAL SUPPLY MANUFACTURERS' ASSOCIATION.**—Edward Wray, 9 S. Clinton St., Chicago. Annual meeting with Association of Railway Electrical Engineers.

**RAILWAY EQUIPMENT MANUFACTURERS' ASSOCIATION.**—Joseph Sinkler, Pilot Packing Co., Peoples Gas Bldg., Chicago. Meeting with Traveling Engineers' Association.

**RAILWAY FIRE PROTECTION ASSOCIATION.**—R. R. Hackett, Baltimore & Ohio R. R., Baltimore, Md. Annual meeting, October 12, 1926.

**RAILWAY REAL ESTATE ASSOCIATION.**—C. C. Marlor, Room 1243, Transportation Building, Chicago.

**RAILWAY SIGNAL ASSOCIATION.**—(See A. R. A., Division IV., Signal Section).

**RAILWAY STOREKEEPERS' ASSOCIATION.**—(See A. R. A., Division VI.)

**RAILWAY SUPPLY MANUFACTURERS' ASSOCIATION.**—J. D. Conway, 1841 Oliver Bldg., Pittsburgh, Pa. Meets with Mechanical Division, A. R. A., June 9-16, Atlantic City, N. J.

**RAILWAY TELEGRAPH AND TELEPHONE APPLIANCE ASSOCIATION.**—G. A. Nelson, 30 Church St., New York. Meets with Telegraph and Telephone Section of A. R. A., Division I.

**RAILWAY TREASURY OFFICERS' ASSOCIATION.**—L. W. Cox, Commercial Trust Bldg., Philadelphia, Pa.

**ROADMASTERS' AND MAINTENANCE OF WAY ASSOCIATION.**—T. F. Donahoe, Gen. Supr. Road, Baltimore & Ohio, Pittsburgh, Pa. Next convention, September 21-23, 1926, Chicago. Exhibit by Track Supply Association.

**ST. LOUIS RAILWAY CLUB.**—B. W. Frauenthal, Union Station, St. Louis, Mo. Regular meetings, 2nd Friday in month, except June, July and August.

**SIGNAL APPLIANCE ASSOCIATION.**—F. W. Edmunds, Sunbeam Electric Manufacturing Company, New York City. Meeting with American Railway Association, Signal Section, March 8-9, 1926.

**SOUTHEASTERN CARMEN'S INTERCHANGE ASSOCIATION.**—J. E. Rubley, Southern Railway Shop, Atlanta, Ga. Meets semi-annually.

**SOUTHERN AND SOUTHWESTERN RAILWAY CLUB.**—A. T. Miller, P. O. Box 1205, Atlanta, Ga. Regular meetings, 3rd Thursday in January, March, May, July, September and November, Piedmont Hotel, Atlanta.

**SOUTHERN ASSOCIATION OF CAR SERVICE OFFICERS.**—J. L. Carrier, Car Serv. Agent, Tenn. Cent. Ry., 319 Seventh Ave., North Nashville, Tenn.

**SUPPLY ASSOCIATION OF AMERICAN RAILWAY TOOL FOREMEN'S ASSOCIATION.**—W. R. Mau, Vanadium Alloys Steel Co., Latrobe, Pa.

**TRACK SUPPLY ASSOCIATION.**—W. C. Kidd, Ramapo-Ajax Corporation, Hillburn, N. Y. Meets with Roadmasters' and Maintenance of Way Association.

**TRAVELING ENGINEERS' ASSOCIATION.**—W. O. Thompson, 1177 East 98th St., Cleveland, Ohio. Annual meeting, September 14-17, 1926, Hotel Sherman, Chicago. Exhibit by Railway Equipment Manufacturers' Association.

**WESTERN RAILWAY CLUB.**—Bruce V. Crandall, 226 West Jackson Boulevard, Room 1001, Chicago. Regular meetings, 3rd Monday each month, except June, July and August.

**WESTERN SOCIETY OF ENGINEERS.**—Edgar S. Nethercut, 1735 Monadnock Block, Chicago, Ill.

## Traffic News

The Traffic Club of Chicago will hold its annual election of officers on March 30.

The Missouri-Kansas-Texas has established fourth morning tri-weekly through package car service between St. Louis, Mo., and Galveston, Tex. The train leaves St. Louis at 9:40 p. m. on Monday, Wednesday and Friday.

The Southern Pacific has opened a freight and passenger office at 1020 Metropolitan Life building, Minneapolis, Minn. This company maintained an office in Minneapolis until the spring of 1918 when the railroads passed into government control.

The American Railway Express Company and the Southeastern Express Company announce that they propose to issue tariffs providing for the collection of storage charges on shipments of merchandise remaining undelivered at destination more than three days. The storage charge for the first day, on shipments weighing 100 lb. or less, will be ten cents.

The Chicago & Eastern Illinois has made arrangements to operate through freight service from Madison, Ill., to East St. Louis, 5 miles, over the tracks of the Terminal Railroad Association of St. Louis. In East St. Louis the C. & E. I. will use the terminal of the Mobile & Ohio. Under the new arrangement, effective March 1, daily through package car service between Chicago and East St. Louis is being operated.

Reports from Colorado indicate that the Denver & Rio Grande Western plans to operate motor buses supplementing its train service between various points along its lines in Colorado. The expectation is that the bus service will be provided by a subsidiary company rather than by the railway directly. The organization of the new bus operating company is expected to be completed in ten days or two weeks.

### B. & M. Plans Increased Bus Service

The Boston & Maine Transportation Company has filed with the Public Service Commission of New Hampshire an application for authority to operate motor coaches between Manchester, N. H., and Lawrence, Mass., serving the towns of Londonderry, Derry, Windham and Salem, and making intermediate stops. The motor coach service, it is stated, will supply mid-day trips not now available on the railroad, and the general effect of the new operations will be to supplement train service on the Lawrence branch.

The petition states that the Manchester railroad station will be the terminal at one end, and the motor coaches will make the South Lawrence station their terminal at the other end, traveling via the most direct route through Londonderry, Derry, Windham and Salem. Interstate passengers will be taken to and from North Lawrence.

### End of Argument on Canadian Grain Rates

After two days' argument the second part of the application of the Western provinces to the Canadian Railway Board regarding Crow's Nest rates on grain and flour eastbound and westbound was disposed of on Wednesday of last week when the Board reserved judgment in that part of the case dealing with grain and flour westbound to Vancouver. In the previous week the Board heard application from Alberta, British Columbia and Saskatchewan for establishment of a mileage scale of rates on grain and flour eastbound to Fort William and also heard their complaint that the order based on legislation of the last session of Parliament directing the application of Crow's Nest rates on that eastward movement of grain and flour was not being fully complied with by the carriers. Judgment on that was also reserved. As to the westbound movement, both Alberta and British Columbia complained that the railways had not fully obeyed the order that Crow's Nest rates be effective to Vancouver and, specifically, they asked the Board for an order to the Canadian Pacific to discontinue the differential of 124 miles used in making the rates east of Calgary. The rates in effect were made by the railways on the basis of the

Canadian National mileage from Edmonton to Vancouver, which is 124 miles greater than from Calgary to Vancouver. The western provinces claimed that the railways had no right to use this differential or "constructive mileage," and asked that it be discontinued.

### Hearings on Railroad Bus

#### Applications in Pennsylvania

A hearing on the Reading's application for authority to operate motor buses in Schuylkill county, Pennsylvania, through a subsidiary company was held before the Public Service Commission in Harrisburg, Pa., on February 25. The opposition, made up of local traction companies, presented elaborate exhibits in defense of their claims that the proposed operations may prove dangerous to their solvency. The railroad company has several other applications for bus permits before the commission and testimony on these will be completed before the final argument in the case, which will probably be heard in Harrisburg before the whole commission.

A hearing on the application of F. J. Scarr, supervisor of motor service of the Pennsylvania, for a bus permit in behalf of his company for a route from Washington, Pa., to Waynesburg, was held by the Public Service Commission in Pittsburgh on February 26.

### N. I. T. League Opposes Gooding Bill

Opposition to the Gooding Bill S-575, the so-called Long and Short Haul Bill, was expressed by the National Industrial Traffic League in a letter which has been sent to the senators of the United States. The letter, signed by 244 commercial, trade and traffic associations in 32 states, charges the bill with embodying a fundamentally unsound governmental policy, the enactment of which would seriously interfere with the commerce of the country. It asks that carriers be permitted to meet water competition at the points where the water competition actually exists, subject to the conditions imposed by the Transportation Act. If the bill becomes a law it would prevent the commission from making a judicial inquiry into a situation that called for relief, even if it were clearly apparent that the best interests of the whole country would be promoted by affording such relief.

Attention is also called to the fact that the demand for the enactment of the bill comes very largely from a single section of the country, and that section is wholly dependent upon the railroads for its transportation. This section cannot benefit from water rates, while the Pacific coast cities will always enjoy low water rates and will continue to get goods by water at low rates, even though the rails serving them were torn up, while the inter-mountain country, the proponent of the measure under discussion, can neither get its goods in nor its agricultural and other products out without rail transportation.

Canadian lines which are not bound by Fourth Section provisions, will, if the bill is enacted, enable Canadian manufacturers to lay their products down at Pacific coast points at lower rates, than competing American manufacturers can. And at border points American manufacturers can avail themselves of the Canadian freight rates.

TWO FRANK THOMSON SCHOLARSHIPS are to be available for the four years beginning next autumn and examinations are to be held in June. According to a notice which has been issued by the Pennsylvania Railroad, examinations are to be held by the College Entrance Examination Board, at New York City, 431 West 117th street. Blanks may be obtained from that board, and must be filled out and sent in before May 31. These scholarships, producing an annual income of \$600 each, are provided by a trust fund which was established in 1907 by the children of Frank Thomson, formerly president of the Pennsylvania, in memory of their father, for the benefit of sons of Pennsylvania employees. There are eight of them altogether and they are intended to provide a technical education to better qualify the recipient for employment by the railroad. Applicants who are already in college will be considered, but attention is called to the fact that the primary purpose of the fund is to aid worthy sons of employees who otherwise would not have an opportunity to get a technical education.

## Commission and Court News

### Interstate Commerce Commission

The commission has found not justified proposed increased class and commodity rates between certain Iowa and South Dakota points and points in Colorado and Utah and has ordered the suspended rates canceled and the proceeding discontinued.

The Interstate Commerce Commission has announced the time for filing briefs in No. 17,000, the general rate structure investigation, and Ex Parte 87, the application of the western railways for a general advance in freight rates. On or before March 8 the carriers are to put into the mails their briefs; on or before April 3 other parties are to put into the mails their briefs; and on or before April 24 the carriers are to mail their reply briefs.

### Lake Cargo Case Re-Opened

The Interstate Commerce Commission has re-opened for further consideration the lake cargo coal rate cases, No. 15007, Pittsburgh Coal Producers' Association et al., v. Ashland Coal & Iron Railway Company et al., and No. 15007 (Sub-No. 1) Pittsburgh Vein Operators' Association of Ohio et al., v. Ashland Coal & Iron Railway Company et al.

All parties to the record are required to show cause within 20 days from March 2 whether or not further hearings should be had to supplement the record already made, such showings to state the nature and purpose of the evidence to be adduced.

### York Switching Case

The Interstate Commerce Commission on March 1 made public its decision, after further hearing, in the case of the Manufacturers' Association of York, Pa., vs. Pennsylvania Railroad Company et al., finding the practice of the Pennsylvania and Western Maryland of interchanging traffic at Hagerstown, Md., and refusing to do so at York under substantially similar transportation conditions unduly prejudicial to York and shippers there located.

The practice of the Pennsylvania and Western Maryland of extending the use of their tracks to each other for the purpose of terminal receipt and delivery of freight at industries in York within the trackage zone described in the report, while contemporaneously refusing to accord to industries outside the trackage zone the benefit of the service, rates, and routes of both lines was found unduly prejudicial to such outside industries.

The practice within the trackage zone as above described was found tantamount in practical effect to the maintenance of a limited reciprocal free switching district. Continuance of the practice was found to be just, fair, and reasonable for the future as to industries in the trackage zone, and substantial equality of treatment required as to industries outside the zone by the establishment in the public interest of a switching district at York, with interchange at that point.

In substance the commission has followed the conclusions of the examiner in the proposed report. It holds that the carriers may continue the existing trackage arrangement in that portion of York where it is now in effect, if they so elect, and if they do, reciprocal switching and mutual absorption of switching charges in the remainder of the district will be regarded as substantial compliance. The York interests have expressed their satisfaction with such an arrangement. If for operating reasons the carriers prefer to establish reciprocal switching throughout industrial York served by these two carriers to include as well the present trackage zone, this may be done, but each must of necessity, by appropriate tariffs, provide for the absorption of all switching charges on transit commodities irrespective of whether the particular industry is local to its line. The Western Maryland has indicated a willingness to do this. The record indicates that the Pennsylvania does absorb switching charges on transit commodities of off-line industries at competing points in central territory under substantially similar transportation conditions and this would seem to be a reasonable requirement under the peculiar circumstances of the instant case.

## Labor News

The Brotherhood of Railway and Steamship Clerks has submitted to the Railroad Labor Board requests for wage increases for the employees it represents on the Southern Pacific, the Kansas City Southern, the Joplin Union Depot and the Chicago & Western Indiana. Negotiations individually with these roads were not successful in securing the increases of from 5 to 6 cents an hour that were asked.

### Terms of Settlement of Threatened T. & P. Strike

The threatened strike of train and engine service employees of the Texas & Pacific was averted on February 25 after conferences between L. W. Baldwin, president of the Missouri Pacific, J. L. Lancaster, president of the Texas & Pacific, and representatives of the Brotherhood of Locomotive Engineers, the Brotherhood of Locomotive Firemen and Enginemen and the Brotherhood of Railroad Trainmen. The controversy arose from the joint operation of the Texas & Pacific's track between New Orleans, La., and Alexandria, which is used by the Missouri Pacific as a bridge line. The tonnage of the Missouri Pacific frequently is handled in Texas & Pacific trains and vice versa over this stretch of joint track, this factor complicating the controversy. Under the agreement which settled the dispute, train and engine service employees of the Texas & Pacific will be transferred to the employ of the Missouri Pacific and operation of the joint track will continue in the same manner as in the past. Texas & Pacific employees who are taken over by the Missouri Pacific will have full seniority rights on the latter road applying only on the joint track and not north of Alexandria on the Missouri Pacific. They will also retain their full seniority on the Texas & Pacific as well as any rights they may have on that line at the present time. In a decision rendered several days ago and prior to the conferences which settled the matter, the Railroad Labor Board approved this method of handling the situation.

### Roads Decline to Increase Train Service Wages

The railroads have declined the request of the Order of Railway Conductors and the Brotherhood of Railroad Trainmen for general increases in wages in train service. The nature of this request was reported in the *Railway Age* of February 6. The labor organizations asked for a reply by March 2. The original requests were framed in such a way that negotiation was not allowed for. The railroads were asked to give either an affirmative or a negative answer.

Several days prior to March 2, on which date the railroads were asked to reply, a supplemental request was received from the unions, asking that, in the event the original request were denied, the railroads agree to appoint committees by territorial groups to discuss the proposed wage increases with representatives of the unions. Chief operating officers of the Western roads met in Chicago on March 3 and selected the following Conference Committee of Managers to discuss the union's request: W. M. Jeffers, general manager, Union Pacific, chairman; W. F. Thiehoff, general manager, Chicago, Burlington & Quincy, vice-chairman; G. S. Waid, vice-president and general manager, Southern Pacific; J. J. Pelley, vice-president, Illinois Central; F. G. Nicholson, vice-president and general manager, Chicago & Eastern Illinois; J. E. Hutchison, vice-president, St. Louis-San Francisco; T. A. Gregg, assistant to vice-president, Atchison, Topeka & Santa Fe; W. E. Williams, manager department of personnel, Missouri-Kansas-Texas; William Walliser, vice-president, Chicago & North Western; L. C. Frith, vice-president, Chicago, Rock Island & Pacific; O. N. Harstad, general manager, Chicago, Milwaukee & St. Paul, and F. Bell, general manager, Great Northern.

Representatives of the eastern roads will meet on Monday to discuss the same request.

The request for a consideration of the wage question by groups rather than by individual roads varies from the practice which the trainmen followed when they received their last increase in wages, in 1924, when negotiations were limited to individual carriers.

## Foreign Railway News

### Egypt Places Large Car Order in England

The Egyptian State Railways have given an order for 1,000 high side gondola cars to the Metropolitan Wagon, Carriage & Finance Company, Ltd., of London.

### Russian Railways Earn Operating Net

The railway system of the Russian Soviet Union, which is conducted by the Commissariat for Transportation, showed a net profit of \$5,665,000 for the fiscal year ending September 30 last, according to a financial report of operations issued by the Russian Information Bureau at Washington. Revenues for the year were \$464,530,000 and expenditures were \$458,865,000. For the present fiscal year a net of about \$25,750,000 is forecast.

Last year was the first year since the war that the railways earned a surplus. The widespread destruction of roadbed, rolling stock and property during the war period necessitated expensive reconstruction which made profitable operation of the railroads impossible.

In 1922-3 the operating deficit was \$74,645,000 and in 1923-4 it was reduced to \$40,685,000. During the ten years before the war the Russian railways yielded a profit to the state during only five years. Heavy state subventions were required to carry them through.

### Chaotic Conditions in China

Military authority has supplanted the regular railway administration staff on practically all sections of every railway in China north of the Yangtze river, according to the Department of Commerce. A military transportation bureau has been established in Peking, which advertises as follows: "Railway cars of all sizes and for all lines. Terms strictly cash. Orders promptly executed. For rates apply to the Military Transportation Bureau, Grand National Hotel." This hotel is located in the French concession, Tientsin.

The Tientsin-Pukow Railway is closed for ordinary commercial traffic. It is reliably reported that 10 locomotives on the Shantung Railway have been damaged beyond repair and are to be scrapped. The Peking-Mukden line is closed to travel from Tientsen to Mukden but open from Tientsen to Peking for passengers. Few freight cars are available, however, and delays and "squeeze" (i. e. graft) are proving ruinous to business. The Peking-Hankow line is closed except in sections, and is handling no export traffic.

### Rail Motor Car Experiments in New Zealand

Recently the suburban lines from which the New Zealand Government Railways derive a very large measure of their revenue have been hard put to it to make ends meet as a result of the open challenge of the privately owned motor bus services catering for suburban passenger traffic over the same routes. So serious has the problem become that the railways department is now engaged on a number of experimental trials with different types of rail motor cars with a view to placing in operation a light, fast and cheap suburban service which can compete successfully against the motor buses.

Of the various types already tried out most successful results have come from the Sentinel-Cammell and Clayton steam cars. These two cars have been subjected to severe trials over several suburban sections and have answered the tests very satisfactorily. Another trial which promised well was the utilization of an ordinary Hudson six-cylinder motor engine housed in one of the department's twelve-ton cars. Runs of 600 miles radius were conducted successfully running at speeds up to 50 miles per hour on a very economic fuel consumption. Starting up was a difficulty met with in connection with this type.

With the experience of the Sentinel and Clayton to go upon the department is seeking fresh types of a similar nature, and several American designs have been noted for the further series of experiments.

## Equipment and Supplies

### Locomotives

#### Pennsylvania Equipment Program

THE PENNSYLVANIA is inquiring for about 100 locomotives, 2,000 steel automobile cars, 125 baggage express cars, 74 coaches, 7 combination passenger and baggage cars, 8 cafe coaches and 20 electric coaches. No authority has yet been obtained from the board of directors for the purchase of the above equipment and plans are in a purely tentative state. In addition to the above, the company recently gave a contract to the Westinghouse Electric & Manufacturing Company for all motive machinery controls and other electrical equipment for 6 electric passenger locomotives and 2 double cab switching locomotives. This equipment will be shipped to the Altoona shops of the railroad company, where the 8 locomotives will be built.

THE NEW YORK CENTRAL contemplates coming into the market soon for a number of locomotives.

THE SILVER FALLS LUMBER COMPANY has ordered one Prairie type locomotive from the Baldwin Locomotive Works.

THE GREAT INDIAN PENINSULA RAILROAD is inquiring through the locomotive builders for from one to 39 electric locomotives.

THE FAIRPORT, PAINESVILLE & EASTERN has ordered one six-wheel switching locomotive from the Baldwin Locomotive Works.

CIA DEL F. C. DE CUNDIN AMARCA (Colombia) has ordered two consolidation type locomotives from the Baldwin Locomotive Works.

THE SOUTH AFRICAN RAILWAYS & HARBORS are inquiring through the locomotive builders for 23 Mountain type, 20 Mikado type and 10 Pacific type locomotives.

THE AKRON, CANTON & YOUNGSTOWN has ordered two eight-wheel switching locomotives from the Lima Locomotive Works. Inquiry for this equipment was reported in the *Railway Age* of January 30.

THE FLORIDA EAST COAST has ordered 23 Mountain type locomotives from the American Locomotive Company. These locomotives will have 28 by 30 in. cylinders. Inquiry for this equipment was reported in the *Railway Age* of February 13.

THE SOUTHERN PACIFIC has ordered 23 three-cylinder, 4-10-2 type locomotives from the American Locomotive Company. These locomotives will each have one cylinder 25 in. by 28 in., and two cylinders 25 in. by 32 in., and will have a total weight in working order of 442,000 lb.

### Freight Cars

SEE PENNSYLVANIA above.

THE BIRMINGHAM SOUTHERN is inquiring for 100 gondola cars of 70 tons' capacity.

THE CANADIAN NATIONAL is inquiring for 50 freight refrigerator cars of 40 tons' capacity.

THE ST. LOUIS-SAN FRANCISCO has ordered 750 freight car underframes from the Tennessee Coal, Iron & Railroad Company.

THE NEW YORK CENTRAL has ordered 500 automobile box cars of 55 tons' capacity from the Merchants Dispatch Transportation Company.

THE BROOKLYN MANHATTAN TRANSIT COMPANY contemplates coming into the market shortly for about 10 work cars to include flat, box and motor supply cars.

THE ILLINOIS CENTRAL has ordered 50 caboose cars from the American Car & Foundry Company. Inquiry for this equipment was reported in the *Railway Age* of January 30.

THE CHICAGO, BURLINGTON & QUINCY is inquiring for 100 ballast cars. This company is also inquiring for 500 hopper cars, as was reported in the *Railway Age* of February 20.

THE NORTHWESTERN REFRIGERATOR LINE COMPANY has ordered 500 refrigerator cars from the American Car & Foundry Company. Inquiry for this equipment was reported in the *Railway Age* of February 27.

THE NASHVILLE, CHATTANOOGA & ST. LOUIS has ordered 125 steel hopper cars of 55 tons' capacity and 75 steel underframe flat cars of 50 tons' capacity from the American Car & Foundry Company, and 100 steel selective ballast cars, 30 ft. 6 in. long, of 50 tons' capacity, from the Rodger Ballast Car Company.

### Passenger Cars

SEE PENNSYLVANIA above.

THE ERIE is inquiring for 23 underframes for passenger cars.

THE BOSTON Elevated is inquiring for 100 all-steel car bodies for elevated service.

THE ILLINOIS CENTRAL is inquiring for 3 dining cars, 5 club baggage cars and 5 baggage cars.

THE NEW YORK CENTRAL has placed an order for repairs to 10 passenger cars with the American Car & Foundry Company. This company is also inquiring for a number of multiple unit cars.

THE NASHVILLE, CHATTANOOGA & ST. LOUIS has ordered 4 steel baggage cars from the American Car & Foundry Company. Inquiry for this equipment was reported in the *Railway Age* of January 9.

### Motor Buses and Trucks

THE NORTHLAND TRANSPORTATION COMPANY, bus operating subsidiary of the Great Northern, has ordered nine motor buses from Wilcox Trux, Inc., Minneapolis, Minn.

### Iron and Steel

THE NEW YORK CENTRAL is inquiring for 200 tons of steel for bridges.

THE CENTRAL OF NEW JERSEY is inquiring for 100 tons of steel for bridges.

THE MISSOURI PACIFIC has ordered 115 tons of structural steel from the American Bridge Company.

THE SEABOARD AIR LINE has ordered 1,000 tons of steel for bridges from the American Bridge Company.

THE SOUTHERN RAILWAY has placed orders for 900 tons of bridge steel of which 150 tons were let to the American Bridge Company.

THE UNION PACIFIC has ordered 129 tons of structural steel for signal bridges and cantilever signal supports at Omaha, Neb., and 206 tons for a viaduct at Denver, Colo.

THE ST. LOUIS-SAN FRANCISCO has ordered 610 tons of structural steel including four deck girder spans and two riveted truss spans for its 1926 bridge requirements from the Virginia Bridge & Iron Company.

### Machinery and Tools

THE MONONGAHELA RAILWAY has ordered a 1,500-lb. steam hammer from the Niles-Bement-Pond Company.

THE CENTRAL OF GEORGIA has ordered one No. 4 Universal milling machine from Manning, Maxwell & Moore, Inc.

THE ST. LOUIS-SAN FRANCISCO has ordered one 8,000-lb. double frame steam hammer from Manning, Maxwell & Moore, Inc.

THE CHESAPEAKE & OHIO has ordered one, 300 to 600-ton hydraulic wheel press from Manning, Maxwell & Moore, Inc.

THE PULLMAN CAR & MANUFACTURING CORPORATION has ordered a journal turning and axle lathe from the Niles-Bement-Pond Company.

THE CLEVELAND, CINCINNATI, CHICAGO & ST. LOUIS has ordered a journal turning and axle lathe from the Niles-Bement-Pond Company.

THE CHICAGO & NORTH WESTERN has ordered three 75-ton hydraulic bushing presses and two 18-in. engine lathes from Manning, Maxwell & Moore, Inc.

THE CHICAGO & NORTH WESTERN is inquiring for one 24-in. standard pattern planer, two 15-in. by 5-ft. portable engine lathes and two 12-in. by 5-ft. portable engine lathes.

THE NEW YORK CENTRAL has ordered a 32-in. vertical drill press from the Niles-Bement-Pond Company and a No. 3 Lenox rotary bevel shear from Joseph T. Ryerson & Son, Inc.

### Signaling

THE CHICAGO & ALTON has ordered from the General Railway Signal Company a mechanical interlocking machine, 15 working levers, for Murrayville, Ill.

THE NEW YORK CENTRAL has ordered from the General Railway Signal Company an interlocking machine, style A, 53 working levers, for Palmyra, N. Y.

THE LOUISVILLE & NASHVILLE has ordered from the General Railway Signal Company an electro-mechanical interlocking for Baxter, Ky.; 4 mechanical and 7 electric levers.

THE NEW YORK RAPID TRANSIT CORPORATION has contracted with the General Railway Signal Company for the signaling of its West End line and its Fulton Street line in Brooklyn, N. Y., 6.4 miles of line. The contract calls for color-light signals to compose an automatic block system, with automatic train stops to be installed throughout; and for interlocking plants at 62nd street and at Nostrand avenue. The first mentioned interlocking will have 22 working levers and the other 13. The machines will have illuminated track diagrams; and both visual signals and automatic stops will be provided for movements in both directions, with check locking between towers.

THE NORFOLK & WESTERN has ordered from the Union Switch & Signal Company the necessary material for the installation of the Union continuous automatic train control on its line between Roanoke, Va., and Shenandoah, Va., 132 miles, single track. There are 25 passing sidings. The order includes equipment for 50 locomotives. This is the second engine division on this road, as provided by the order of the Interstate Commerce Commission. The installation of the A. P. B. automatic signals, position-light, has been completed and the A. T. C. apparatus is to be put in as fast as possible in order to complete the work by July, 1926. This installation with the 106 miles already installed will make 238 miles continuous A. T. C. from Hagerstown, Md., to Roanoke, Va.

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A Truck Load of L. C. L. Freight

### Supply Trade News

W. G. Zahrt, sales manager of the Wayne Tank & Pump Company, Ft. Wayne, Ind., has resigned to enter the life insurance business.

Henry Disston & Sons, Inc., Philadelphia, Pa., has added a modern machine knife manufacturing department to its branch factory at Cincinnati, Ohio.

A. H. Lichty, vice-president of the Colorado Fuel & Iron Company, in charge of industrial relations, has resigned, effective the latter part of March.

S. E. Gillespie, representative of the Union Switch & Signal Company in the Orient, has been appointed assistant resident manager, with headquarters at St. Louis, Mo.

G. E. Brown, formerly general foreman electrician of the Northern Pacific, whose resignation on January 15 to take a position with the Westinghouse Electric & Manufacturing



G. E. Brown

Company, was noted in the *Railway Age* of February 6, was graduated in June, 1913, from the Electrical Engineering Department, University of Michigan. After leaving school, Mr. Brown worked in the testing department of the General Electric Company at Schenectady, N. Y., and Pittsfield, Mass., until January, 1916, when he went as assistant general foreman electrician to the Northern Pacific, later becoming general foreman electrician. He remained in the employ of this company until he accepted his present position.

He has been given charge of sales for the transportation and industrial revision of the Westinghouse Electric & Manufacturing Company in the Minneapolis district, with headquarters at 2303 North East Kennedy street, Minneapolis, Minn.

The Housley Flue Connection Corporation, Santa Monica, Cal., has removed its Indianapolis, Ind., factory and general sales office from 1118 Newman street to 3938 College avenue.

F. L. Eldridge, in charge of telephone sales of the French Battery Company, Madison, Wis., will now also have charge of the railway sales, with headquarters in the Conway building, Chicago.

The Hyman-Michaels Company, Chicago, has purchased the Mammoth, Keystone & Kennett properties of the United States Smelting, Refining & Mining Company, located at Kennett, Cal.

A. S. Anderson, formerly secretary of the Terre Haute Malleable Manufacturing Company, Terre Haute, Ind., has been elected president of the Standard Malleable Castings Company to succeed Emil J. Fischer, resigned.

W. V. Knowles, representative of the Titanium Alloy Manufacturing Company, with headquarters at Chicago, has been transferred to Cleveland, Ohio, and has had his jurisdiction extended to include the ceramic division of this company.

The corporate name of the Burnside Steel Company, Chicago, has been changed to the Burnside Steel Foundry Company to better describe the company's products. No change

in ownership, management or officers is involved. **Knowles Pittman**, formerly sales manager of the Nugent Steel Castings Company, has been appointed sales manager.

**Frederick I. Sanderson**, manager of the New York office of the Wellman-Seaver-Morgan Company, Cleveland, Ohio, has been elected first vice-president. He was born in 1882 in England, where he received his education, and entered business by joining the staff of J. T. North, who had varied interests in Chile. In 1904 he entered the employ of Jeremiah Head & Son, who at that time were the European agents of the Wellman-Seaver-Morgan Company and at the same time acted as secretary of the Otis Steel Company, Ltd. In 1905, when Wellman, Seaver & Head, Ltd., was formed, he became secretary, was elected a director in 1913, and became managing director in 1917. Later when



F. I. Sanderson

this company was merged into the Wellman-Smith-Owen Engineering Corporation, Ltd., he became a director and commercial manager. For several years he has handled the European affairs of the Wellman companies and is a director of Wellman-Smith-Owen (France, Societe Anonyme).

**H. N. Goodell** has been appointed district manager and manager at Kansas City of the **Graybar Electric Company**, New York. The headquarters of the western district were recently transferred from St. Louis, Mo., to Kansas City.

**C. G. McCaulley**, formerly superintendent of signals of the Florida East Coast, has been appointed vice-president of the **E. A. Lundy Company**, Pittsburgh, Pa. He entered railway service as a track laborer on the Pennsylvania on April 7, 1897, and from December, 1899, until April, 1901, held the positions of switch tender, tie inspector and leverman. He resigned from the latter position to accept one in a car shop and resigned on September 1 of the same year to enter the employ of the Union Switch & Signal Company, as a helper on the construction of the Pittsburgh terminal interlockings. Until March 1, 1907, he was employed in the signal department of the Pennsylvania at Pittsburgh,



C. G. McCaulley

Pa., resigning to become supervisor of signals of the Washington Terminal Company. He was later promoted to supervisor of tracks and signals. He resigned on March 1, 1919, to become engineer of construction in charge of the installation of the Jacksonville terminal interlockings of the Atlantic Coast Line, which position he held until January 1, 1920, when he was appointed assistant superintendent of the Jacksonville Terminal Company. He held the latter position until May 1, 1920, when he was promoted to superintendent, which position he held until February 1, 1925, when he resigned to become superintendent of signals of the Florida East Coast at St. Augustine, Fla., which position he has held until his recent appointment.

**O. C. Badger**, assistant engineer in the office of the system bridge engineer of the Atchison, Topeka & Santa Fe, has resigned to become an engineer in the Railways bureau of the **Portland Cement Association**, with headquarters at Chicago.

The **American Hoist & Derrick Company**, which has its works and main office at St. Paul, Minn., has opened a branch office at 1943 Railway Exchange building, St. Louis, Mo., with **Ward B. Maurer** in charge. Mr. Maurer, before joining the sales force of the American Hoist & Derrick Company, several years ago, was a member of the engineering staff of the Baltimore & Ohio.

The **Bethlehem Chemical Company** has located at Wilmington, Del., for the manufacture of paints and lacquers, and has taken over the plant formerly occupied by the Artillery Fuse Company, of about 20 acres. The company is incorporated for \$1,000,000, and its officers are: **M. J. Connelly**, president; **E. F. Johnston**, vice-president and treasurer, and **J. M. Smith**, secretary. The company will manufacture a full line of lacquers under the trade name of Bethco, from the base coats to the finished products. Machinery has been ordered for the first unit that will produce 60,000 gal. a month.

**A. Swartz**, formerly receiver and manager of the Toledo & Western, has been appointed vice-president and sales manager of the **Interstate Railway Supply Company**, Cleveland, Ohio.



A. Swartz

He was born in Columbus, Ohio, in 1878, entered railway service as a rodman on the Ann Arbor in 1897, and in the following year became a topographer and draftsman on the Tennessee Central. He was employed as a draftsman on the New York Central Lines West from 1899 to 1900 and as a draftsman and assistant division engineer on the Baltimore & Ohio from 1901 to 1905. He was then chief draftsman and office engineer on the Erie until 1907, when he was promoted to division engineer, which position he held

until 1912. During the following year he was engineer of maintenance of way of the Toledo Railway & Light Company, and in 1913 was appointed vice-president of the Toledo & Western, which position he held until 1916, when he was also appointed manager of railways of the Toledo Railways & Light Company. When the Community Traction Company succeeded the Toledo Railways & Light Company, he was appointed vice-president and manager, which position he held until 1923, when he was appointed receiver and manager of the Toledo & Western. Since September, 1924, he has been located in Chicago representing railway supply companies.

#### Chicago Railway Equipment Company

The annual report of the Chicago Railway Equipment Company for 1925 shows a surplus or undivided profit of \$1,249,606 as compared with \$1,479,137 in 1924 after the payment of dividends of \$209,774 on the 7 per cent preferred stock and \$179,808 on the common stock. Additions to the capital assets to the amount of \$107,241 were provided out of the year's earnings.

#### American Brake Shoe & Foundry Company

The annual report for operations for 1925, shows earnings available for dividends after allowances for federal taxes, of \$2,786,607 as compared with \$2,454,905 in 1924. Of this amount \$1,497,895 was paid out in dividends including 7 per cent on the preferred stock and 5 1/4 per cent on the common, and \$600,000 was applied to the reduction of the patent and good will accounts, leaving a

surplus of \$694,962. Joseph B. Terbell, chairman of the board, in his statement to stockholders, gives further details as follows:

"Our working capital, which had been depleted during the past few years on account of additions to capital assets, is now \$9,569,412. This is approximately the amount at which it stood on December 31, 1919, at which time our present expansion program was inaugurated.

"No events of unusual interest have occurred during the year. Sales were in good volume and the net results obtained therefrom were satisfactory. The railroads are our largest customers, and while their purchases of new equipment were much below normal, we were not adversely affected for the reason that only a small percentage of the products we sell are used in the manufacture of new cars and locomotives. Competition in the products of your company is becoming increasingly keen and may result in a smaller margin of profits.

"At the quarterly meeting of your board of directors held on December 8, 1925, a disbursement of \$1.50 per share was authorized as a dividend on your common stock. It is hoped that this rate may be continued. Your board of directors see no reason for changing their policy of conserving a part of the earnings for the future growth and further diversification of the products of the company. Plans now in contemplation for the erection and equipment of new buildings during 1926 will require an expenditure of approximately \$1,000,000.

"Orders so far received in 1926 show a slight increase over the same period of last year. Underlying conditions appear to be favorable, and unless these conditions change we anticipate another satisfactory year."

### Pressed Steel Car Company

The annual report of the Pressed Steel Car Company for 1925, shows net earnings available for dividends of \$939,050 as compared with \$1,179,355 for 1924. F. N. Hoffstot, president, gives interesting details of the equipment market in general and of the company's operations in particular as follows:

"During the year 1925 there were built in other than railroad companies' shops about 90,000 cars. During the first eight months of 1925 there were ordered only 28,000 cars, and less than 68,000 cars were ordered for the entire year. Few, if any, of these cars will enter into this year's operations for any of the car companies. This number of cars is less than half the estimated yearly replacements, to say nothing of cars necessary to take care of the increase due to natural expansion of the country.

"To make the situation entirely clear, would state that if our plants were operating to maximum capacity we could have built all the cars that were purchased last year, and several other car builders could have done the same, so that if earnings are not what might be expected it is entirely due to lack of volume of business.

"The results obtained during the year were possible only through the most careful and conservative management. Our operating officials have been and are bending every effort to increase the efficiency of the plants and further reduce costs.

"Normal purchases of equipment have not been made for the last two years for various reasons. First, because railroads have been able to get greater mileage in the handling of their trains, due to excellent operations, absence of labor troubles, little or no congestion at terminals and the co-operation of shippers in loading freight cars to capacity. Second, a number of railroads especially in the East have been considering the question of consolidation, and have not placed the car orders they ordinarily would have to take care of replacements and provide necessary new equipment. There comes a time, however, in railroad operations when replacements must be made, and this is especially true of rolling stock.

"Interviews with prominent railroad interests indicate that large budgets have been prepared, including generous appropriation for new equipment, which should cause a substantial amount of car buying. We have received a proportionate share of all business placed."

The comparative income account follows:

	1925	1924
<b>EARNINGS—</b>		
From operations .....	\$1,006,345	\$1,785,630
From dividends on stock and securities owned and other sources.....	233,545	54,744
From interest and discount after deducting interest on the \$6,000,000.....	292,745	244,737
 <b>DEDUCT—</b>		
Gross earnings .....	\$1,532,636	\$2,085,110
Maintenance of buildings and equipment....	\$293,586	\$505,755
Depreciation, obsolescence, etc.....	300,000	400,000
 Net earnings for year.....	<b>\$939,050</b>	<b>\$1,179,355</b>

### American Locomotive Company

The annual report of the American Locomotive Company, issued this week, showed a deficit for the calendar year, 1925, after allowances for depreciation of \$843,321 as compared with net income before allowances for income taxes in 1924 of \$7,409,507. President William H. Woodin, in his remarks, says:

Due to the lack of orders for locomotives, both domestic and foreign, the plants of the company had the lowest output of any year since the company's formation in 1901. The railroads of the United States, notwithstanding the large volume of freight handled by them and their generally prosperous condition, placed only a small amount of new locomotive business with the builders during the year. The foreign business continued to be in the same small volume as for several years past.

The profit earned for the year after all charges, but before deducting depreciation, was \$468,948. Depreciation on plants and equipment amounting

to \$1,312,269, computed at the regular standard rates, was charged against the income account, leaving a net deficit for the year of \$843,321.

During the year there was expended for improvements to the plants \$1,240,621, which amount was charged to reserves previously created for such purposes.

During the year there was paid out of the accumulated surplus earnings of the company four regular quarterly dividends on the preferred stock each of \$1.75 per share, totaling \$1,750,000; four regular quarterly dividends on the common stock each of \$2 per share, totaling \$4,000,000, and four extra dividends on the common stock each of \$2.50 per share, totaling \$5,000,000.

On December 31 the excess of current assets over current liabilities amounted to \$37,061,785. The company had no loans payable and had in its treasury \$23,124,934 in cash and marketable securities of which \$17,686,527 was in United States Government obligations, \$2,176,017 in bonds and notes of the Canadian Government, and \$3,262,390 in cash on hand and in banks.

The inventory account on December 31, 1925, including materials, supplies, stock locomotives and parts and contract work in process, amounted to \$9,131,537, as compared with \$7,705,151 on December 31, 1924. The materials and supplies have been valued at cost or market price, whichever was lower.

Unfilled orders on December 31, 1925, amounted to \$15,919,129, as compared with \$12,532,462 on December 31, 1924.

Probably never before in the history of locomotive building has there been such a demand for the development of locomotives that will give the maximum power with a minimum of fuel and maintenance expenses. The railroads of this country still have in service a very large percentage of light and inefficient power. Some of this is properly used in branch line service, but there is no doubt that a large part of it should be replaced by modern economical power that would result in distinct economies in operation. Your company is constantly developing the steam locomotive for all classes of service, and has proven conclusively by actual tests with engines of new design such great efficiency in operations as would warrant the railroads in making substantial replacements of older power. In this direction the most outstanding development in the last few years has been the three-cylinder locomotive built by this company which is now in service on 10 different railroads in the United States.

Another recent development of interest is the oil-electric locomotive. We have, in co-operation with the Ingersoll Rand Company and the General Electric Company, built four of these locomotives and now have 16 under construction, all of comparatively small power units, principally for switching and slow speed freight service. The problems involved in the development of this type of locomotive in larger units for main line freight and passenger service are immeasurably difficult and involve such a great amount of experimental work that a commercial success of heavy power of this type may not be expected for a long time to come. The steam locomotive will, in our opinion, continue to dominate the larger field for many years.

There is now every indication that the locomotive business will show a substantial improvement during the coming year.

The income account for 1925 compares with that for 1924 as follows:

	1925	1924
Gross earnings .....	\$27,773,493	\$56,301,843
Manufacturing, maintenance and administrative expenses .....	27,304,545*	47,410,441
Depreciation on plants and equipment.....	1,312,269	1,445,890
Interest on bonds of constituent companies, etc. ....	36,004	
 Deficit for year.....	<b>\$843,321</b>	Profit \$7,409,507
Deduct for United States and Canadian income taxes .....	.....	760,000
 Available profit .....	Loss \$843,321	\$6,649,507

\*Including interest and taxes.

### Obituary

**John Sealy**, formerly president of the International Creosoting & Construction Company until February, 1923, died in Neuilly, France, and was buried on March 6 at Galveston, Texas.

**Robert Hobson**, chairman of the board of the Canadian Locomotive Company, Ltd., Hamilton, Ontario, and president of the Steel Company of Canada, Ltd., died on February 25 at his home in Hamilton, at the age of 65. He first began work on the railroads but later became secretary-treasurer of the Hamilton Blast Furnace Company. In 1899 he went to the Hamilton Iron & Steel Company as general manager, and in 1910 was appointed general manager of the Steel Company of Canada, Ltd., becoming president of that company in 1916. He had served also as an officer or a director of a number of financial and industrial organizations.

**BURLINGTON PENSIONS.**—The Chicago, Burlington & Quincy paid retiring allowances during 1925 to 863 former employees. During the year the relief department distributed \$593,809, of which \$370,078 was due to sickness and \$223,730 to accidents. About 75 per cent of the permanent forces are members of the relief department, and 31,488 members carry death benefits.

## Railway Construction

**ALASKA ANTHRACITE.**—The House of Representatives has passed a bill to extend the time for the completion of this road in Alaska. The company is given two years from May 11, 1925, in which to file its map of final location for its Stillwater branch, running up Stillwater creek 5.79 miles, two years from the date of passage of the act to file its final location of the Canyon Creek branch, and three years in which to complete the construction of the main line and branches.

**ATCHISON, TOPEKA & SANTA FE.**—Bids will soon be received for the grading in connection with the construction of an extension from Pawhuska, Okla., to Fairfax, a distance of 32 miles. This extension in connection with the branch line from Owen to Pawhuska will constitute a cut-off connecting the Southern Kansas division with the Eastern Oklahoma division, which will shorten the distance from Kansas City, Mo., to Oklahoma and Texas points about 61 miles.

**BOSTON & MAINE.**—This company is preparing for the construction of a gravity classification yard near Lowell Junction, Mass., to have a capacity of 2,500 cars.

**BOSTON & MAINE.**—A contract has been awarded to John H. Proctor & Co., for the construction of a coke reclamation plant at East Somerville, Mass., to cost approximately \$28,000.

**CANADIAN NATIONAL.**—Bids will soon be received for the construction of a 44-mile branch line in the vicinity of Turtleford, Sask., which is estimated to cost \$1,571,000. It is also expected that bids will be taken shortly for the construction of the Dunblane, Sask.-Central Butte branch, estimated to cost \$1,000,000.

**CANADIAN PACIFIC.**—A hotel will be constructed at Regina, Sask., which it is planned to have completed and in operation by the summer of 1927.

**CENTRAL OF GEORGIA.**—This company is reported to be contemplating the erection of a small station at Fort Benning, Ga.

**CENTRAL OF VERMONT.**—A contract has been awarded to the Roberts & Schaefer Company, Chicago, for the erection of an electrically operated cinder plant at New London, Conn.

**CHICAGO, ROCK ISLAND & PACIFIC.**—This company has awarded a contract for the construction of a 300-ton capacity coaling station at Enid, Okla., to the Railroad Water & Coal Handling Company, Chicago; a 400-ton capacity coaling station at Washington, Ia., to the Howlett Construction Company, and 400-ton capacity coaling stations at West Liberty, Ia., and Topeka, Kan., to Fairbanks Morse & Company.

**DETROIT & IRONTON.**—In the *Railway Age* of February 27 it was erroneously stated that this company had applied to the Interstate Commerce Commission for authority to construct a line from Petersburg, Va., to Toledo, Ohio. The item should have read "Petersburg, Mich., to Toledo, Ohio."

**SOUTHERN.**—Extensive improvements will be made by this company on six of its lines, aggregating approximately 1,000 miles of road, at a total expenditure of about \$4,000,000, to increase traffic capacity and promote operating efficiency, the work to be started at once. Roadway and structures will be strengthened to permit the use of heavier and more powerful locomotives and passing track facilities will be increased to accommodate the longer trains that will be handled on the following lines: Chattanooga to Macon via Atlanta, Bristol to Chattanooga, Chattanooga to Memphis, Richmond to Danville, Winston-Salem to Charlotte, Selma to Suggsville, Ala. On the line between Chattanooga and Macon automatic signals and telephone train dispatching circuits will also be installed.

**UNION PACIFIC.**—The Interstate Commerce Commission has authorized the construction of a branch line south from Yoder, Wyo., 10 miles to serve an irrigation district with a large acreage of sugar beets; cost estimated not to exceed \$500,000.

## Railway Financial News

**BALTIMORE & OHIO.**—*1925 Earnings.*—The annual report for 1925 shows a net corporate income after charges of \$20,793,508, equivalent after allowances for preferred dividends to \$12.14 a share on common stock. Net income in 1924 was \$16,319,690 or \$9.19 a share. The Baltimore & Ohio pays 4 per cent on its preferred stock and 5 per cent on its common. The preliminary statement appears in full in adjoining columns.

**BOSTON & MAINE.**—*Bankers Relinquish Fees.*—The general readjustment committee has announced that the syndicate managers associated with the work of reorganizing the Boston & Maine and that the New York, New Haven & Hartford, also, as a member of the underwriting syndicate, will relinquish compensation and commissions aggregating \$300,000, otherwise due them in connection with the carrying out of the reorganization plan. A statement issued by the general readjustment committee gives details as follows:

"The general readjustment committee of the Boston & Maine has received from the syndicate managers who are associated with the work of reorganization—Kidder, Peabody & Co.; Lee, Higginson & Co., and Harris, Forbes & Co., Inc.—an offer to relinquish all compensation due them for their services and agreements in assisting to carry out the plan. This applies to compensation due them both as syndicate managers and as members of the underwriting syndicate.

"The obligation of the underwriting syndicate to purchase any unsubscribed balance of the proposed issue of \$13,000,000 of prior preference stock remains unaffected.

"The New York, New Haven & Hartford, which is a member of the underwriting syndicate to the extent of its subscription to the new issue, has also offered to surrender its commissions as a member of the syndicate.

"The compensation to which the syndicate managers and the New Haven would be entitled under the syndicate agreement is approximately \$300,000.

"Both the syndicate managers and the New Haven are represented on the general readjustment committee. In their opinion and in that of the general readjustment committee, the carrying out of the plan is of supreme importance both to the securities holders of the road and to the public interest, and therefore they have decided to waive the compensation to which they are entitled in the belief that it will facilitate the carrying out of the plan.

"The general readjustment committee has accepted with satisfaction these offers which represent such a substantial contribution to the reorganization, to the assets of the Boston & Maine, and to the transportation resources of that great section of northern New England which the railroad serves."

**CENTRAL OF GEORGIA.**—*Bonds Sold.*—Kuhn, Loeb & Co. have sold \$3,000,000 refunding and general mortgage 5 per cent bonds, series C, at 97 to yield 5.91 per cent to maturity. The bonds mature April 1, 1959. Details of the bond issue are given as follows:

These bonds will be issued under the refunding and general mortgage of the railway company dated April 1, 1919, and will be secured by a direct mortgage on 1,488.56 miles of railroad owned in fee (of which 58.09 miles are leased to Seaboard Air Line Railway Company) on valuable leaseholds and trackage rights covering 490.97 miles, and on important and valuable terminals at Savannah, Macon, Atlanta, Columbus, Ga., and elsewhere, subject to \$31,058,300 of prior lien bonds (outstanding at the average rate of only \$20,865 per mile on the 1,488.56 miles of road owned in fee), which cannot be extended or renewed and for the retirement of which refunding and general mortgage bonds are reserved.

The present issue of bonds is being sold to reimburse the company for expenditures heretofore made for additions and betterments to the property subject to the refunding and general mortgage.

The entire series "C," but not a part thereof, will be redeemable at the option of the company, upon not less than 90 days' previous notice, on April 1, 1934, or on any interest date thereafter, at 105 per cent and accrued interest until and including April 1, 1954, and thereafter at a premium which shall diminish at the rate of one-half of 1 per cent for each six months elapsed up to date of maturity.

**DELAWARE & HUDSON.**—*Bonds.*—This company has applied to the Interstate Commerce Commission for authority to issue and sell \$2,084,000 of first and refunding mortgage 4 1/2 per cent bonds and to sell \$112,000 of the bonds now held in the treasury. The bonds are to be sold to Kuhn, Loeb & Co., and the First National Bank at 90. Announcement of the sale of these bonds to the public was reported in the *Railway Age* of February 27.

**DENVER & SALT LAKE.**—*Claims.*—Judge Samuel W. Johnson of the United States District Court will hold a hearing at Brighton, Colo., on March 15, to consider claims advanced against the Denver & Salt Lake. The report of the referee to the court recommended the allowance of various claims totalling approximately \$400,000.

**HOCKING VALLEY.**—*Notes.*—The Interstate Commerce Commission has granted this company authority to issue \$6,000,000 six months' 5 per cent secured gold notes to meet payment of a note of the same amount due March 1, 1926, and to pledge as collateral security for these notes \$7,500,000 general mortgage bonds, series A. In connection with its decision the commission said: "Matters presented upon this record by the applicant suggest the inference that when the applicant, as in this case, has had an informal conversation with the Director or with Division 4 or a member thereof, unless the applicant's attention has been expressly directed in such conversation or informal conference to possible objections or difficulties connected with the application the applicant may assume that no such objections or difficulties exist or can properly arise and be recognized. Brief reflection must convince anyone that such inferences are not warranted."

**ILLINOIS CENTRAL.**—*Acquisition.*—Oral arguments on the joint application of the Illinois Central and the Yazoo & Mississippi Valley for authority to acquire control of the Alabama & Vicksburg and the Vicksburg, Shreveport & Pacific, were heard by the Interstate Commerce Commission on March 3.

**KANSAS CITY SOUTHERN.**—*Lease of Texarkana & Fort Smith.*—The Interstate Commerce Commission has authorized the Kansas City Southern to lease that part of its subsidiary Texarkana &

Fort Smith in Arkansas. Authority has also been given for the Texarkana & Fort Smith to issue \$10,000,000 first mortgage 5½ per cent bonds, series A, not to exceed \$5,591,000 to be exchanged for a like amount of 30-year general first mortgage 5 per cent bonds owned by the Kansas City Southern and deposited by it for security, the remainder to be sold at not less than 97. The Kansas City Southern has been given authority to assume obligation and liability as guarantor of the bonds.

**PENNSYLVANIA.**—1925 *Earnings.*—Checks for the quarterly dividend mailed on February 26 to 140,314 stockholders were accompanied by a brief message from General W. W. Atterbury, President, calling attention to the fact that the Company's estimated net income for 1925 was \$62,437,300, an increase of \$24,302,000 over 1924. General Atterbury further said:

"The above results show a marked improvement over 1924. The condition of your property is better than it has been for several years, and the financial position of your company is stronger than it has been at any time since the war. I desire to express on behalf of the management our appreciation of practical co-operation on the part of the stockholders, the shippers and the public, and of efforts of a loyal and efficient staff of officers and employees, which assisted the Company in achieving the foregoing results."

Net income of \$62,437,300 is equivalent to \$6.25 per \$50 share  
(Continued on page 615)

## Annual Reports

### Synopsis of Annual Report, The Baltimore & Ohio Railroad Company, Calendar Year, 1925

OFFICE OF THE PRESIDENT

Baltimore, Md., February 24, 1926

To the Stockholders of

The Baltimore and Ohio Railroad Company:

In order that you may be advised as promptly as possible of the results of the operations of your property for the year ended December 31, 1925, the President and Board of Directors submit herewith statement showing the Income Account of the year, compared with 1924, together with a Condensed Balance Sheet as of December 31, 1925.

The customary annual report will be prepared and forwarded to those stockholders who indicate to the Secretary of the Company their desire to receive the same.

The operations of the year have reflected the continued general business activity and the more extended resumption of coal production in the territory directly served by your Company.

The net income for the year available for dividends and other corporate purposes was \$20,793,508 an increase of \$4,473,818 over 1924.

After paying 4 per cent. dividend upon the preferred stock there remained \$18,438,981 equal to \$12.14 per share on the common capital stock, upon which dividends at the rate of 5 per cent. were declared and paid.

The total accumulated surplus of the Company at December 31, 1925, was \$67,672,879.

The program for rehabilitating the Company's equipment was continued during the year. Three passenger cars, and 8,503 freight and work cars, no longer suitable for efficient operation, were retired from service. Two thousand two hundred and ninety-five freight cars were thoroughly rebuilt. Ninety-six new all-steel passenger cars, and 5,385 new freight cars were purchased. Orders were placed for car equipment for delivery early in 1926, as follows: Eighty-three pieces of all steel passenger car equipment including coaches, baggage, postal, dining and express cars, 4,000 steel box cars, and 3,000 all steel hopper cars.

Fourteen passenger engines were rebuilt and modernized, and 8 Mikado type engines were rebuilt in the Company's shops and converted to Pacific type for heavy passenger service. Forty-six heavy freight locomotives were thoroughly rebuilt and converted into more efficient type, and 74 Consolidation engines were rebuilt and converted into heavy switch engines. One hundred and thirty-seven engines which had become obsolete in type were retired from the service. Fifty heavy freight locomotives have been ordered for delivery early in 1926.

The results from the operation of the "Capitol Limited" trains between New York, Washington and Chicago seemed to justify the installation of similar high class passenger service through the

"National Limited" operating between New York, Philadelphia, Baltimore, Washington and St. Louis and the "Detroit-Washington Limited" between Washington and Detroit. Increased long distance travel incident to the improved service has offset in substantial part the loss of short-haul business due to the automobile and motor bus competition.

There was an increase in the average distance passengers traveled in 1925, compared with 1924, of 11.6 per cent., so that notwithstanding a total decrease of 12.78 per cent. in passengers carried the passengers one mile decreased but 2.67 per cent. and passenger revenue but 3.94 per cent.

The tons of revenue freight moved during the year increased 11.22 per cent. compared with 1924, and the revenue ton miles increased 10.99 per cent. The total freight revenue increased 7.43 per cent.

The average train load was 849 tons, an increase of 65 tons over 1924, while the speed of freight trains increased 3 per cent. per hour.

From each dollar of earnings during the year the Company expended for maintenance 34.37 cents, as compared with 33.57 cents in 1924, but owing to a reduction in transportation expenses from 38.03 cents to 35.62 cents the total operating expenses consumed but 75.40 cents out of each dollar of earnings in 1925, as compared with 77.01 cents in 1924.

The property was in good physical condition at the end of the year.

The Company had funded debt, other than equipment trusts, maturing in 1925 aggregating approximately \$132,000,000. These maturities were, in part, anticipated or provided for through refinancing in 1924 or early in 1925. All of the obligations of the Company maturing in 1925 having been taken care of, the Company has now no large maturities to meet during the next several years. The Company was fortunate in being able to accomplish this large amount of refinancing upon favorable terms during period of comparatively easy money. With the refinancing now completed, the average rate of interest upon the Company's long time debt becomes 4.75 per cent., an increase of something less than one-half of one per cent.

During the year the Management took occasion to commend the Baltimore and Ohio service to the shareholders and sought their co-operation in its efforts to secure a greater proportion of the business moving to and from the territory served by your Company. The response was most gratifying and helpful, and it is hoped this co-operation will be continued and extended where opportunity offers.

The conditions of business generally throughout the country, and particularly in the territory served by the Baltimore and Ohio appear sound, and the outlook is encouraging at this time.

DANIEL WILLARD, President.

[ADVERTISEMENT]

## THE BALTIMORE &amp; OHIO RAILROAD COMPANY

## Income Account

	1925	1924	Increase or Decrease
	Amount	%	
Revenue from freight transportation.....	\$193,558,361	\$180,179,357	\$13,379,004 7.43
Revenue from passenger transportation .....	27,904,665	29,047,718	*1,143,053 *3.94
Revenue from mail, express and other transportation service.....	16,083,914	15,091,720	992,194 6.57
Total railway operating revenues.....	<b>\$237,546,940</b>	<b>\$224,318,795</b>	<b>\$13,228,145</b> 5.90
Maintenance of way and structures.....	\$28,440,416	\$26,638,363	\$1,802,053 6.76
Maintenance of equipment.....	53,206,661	48,659,504	4,547,157 9.34
Traffic .....	4,551,082	4,242,473	308,609 7.27
Transportation .....	84,621,877	85,313,755	*691,878 *0.81
General .....	6,210,388	6,169,512	40,876 0.66
Miscellaneous .....	2,069,173	1,729,025	340,148 19.67
Total railway operating expenses.....	<b>\$179,099,597</b>	<b>\$172,752,632</b>	<b>\$6,346,965</b> 3.67
Transportation ratio .....	35.62%	38.03%	*2.41% ...
Total operating ratio .....	75.40%	77.01%	*1.61% ...
Net revenue from railway operations.....	<b>\$58,447,343</b>	<b>\$51,566,163</b>	<b>\$6,881,180</b> 13.34
Taxes .....	\$10,064,868	\$9,548,086	\$516,782 5.41
Equipment and joint facility rents.....	5,348,388	3,933,753	1,414,635 35.96
Total charges to net revenues.....	<b>\$15,413,256</b>	<b>\$13,481,839</b>	<b>\$1,931,417</b> 14.33
Net Railway operating income, as defined in the Transportation Act of 1920... .	\$43,034,087	\$38,084,324	\$4,949,763 13.00
Other income—rents, dividends on stock and interest on bonds owned.....	6,237,801	5,657,290	580,511 10.26
Total income from all sources.....	<b>\$49,271,888</b>	<b>\$43,741,614</b>	<b>\$5,530,274</b> 12.64
Interest .....	\$26,642,481	\$25,141,409	\$1,501,072 5.97
All other deductions .....	1,835,899	2,280,515	*444,616 *19.50
Total deductions .....	<b>\$28,478,380</b>	<b>\$27,421,924</b>	<b>\$1,056,456</b> 3.85
Balance available for dividends and other corporate purposes.....	<b>\$20,793,508</b>	<b>\$16,319,690</b>	<b>\$4,473,818</b> 27.41
Dividends declared were:			
Preferred stock—4% .....	\$2,354,527	\$2,354,527	... \$67 ...
Common stock—5% .....	7,597,270	7,597,337	... ...
Total dividends .....	<b>\$9,951,797</b>	<b>\$9,951,864</b>	<b>*\$67</b> ...
Leaving a surplus of.....	<b>\$10,841,711</b>	<b>\$6,367,826</b>	<b>\$4,473,885</b> 70.26

## Statistics

Revenue passengers carried.....	14,745,684	16,907,215	*2,161,531 *12.78
Revenue passenger miles.....	878,441,702	902,528,153	*24,086,451 *2.67
Average miles per passenger.....	59.57	53.38	6.19 11.60
Average rate per passenger mile (cents).....	3.177	3.218	*0.041 *1.27
Tons of revenue freight handled.....	104,637,773	94,078,116	10,559,657 11.22
Revenue ton miles.....	19,459,442,692	17,532,964,820	1,926,477,872 10.99
Average miles per ton.....	185.97	186.37	*0.40 *0.21
Average rate per ton mile (mills).....	9.95	10.28	*0.33 *3.21
Revenue tons per train mile.....	848.68	784.12	64.56 8.23
Train miles per train hour.....	10.30	10.00	0.30 3.00

\* Decrease.

## THE BALTIMORE &amp; OHIO RAILROAD COMPANY

## Condensed Balance Sheet—December 31, 1925

## ASSETS

Investment in property used in Transportation Service.....			\$788,218,839
Road .....	\$580,525,252		
Equipment .....	207,693,587		
Investment in Separately Operated Companies, including Miscellaneous Physical Property.....			53,760,388
Investment in Sinking Funds and Deposits account Property Sold.....			107,879
Investment in Other Companies.....			23,746,215
Total Investments .....			\$865,833,321
Current Assets .....			57,901,680
Cash .....	\$16,996,046		
Other .....	40,905,634		
Deferred Assets .....			3,606,217
Total Assets .....			\$927,341,218

## LIABILITIES

Capital Stock Outstanding.....			\$210,808,535
Preferred .....	\$58,863,181		
Common .....	151,945,354		
Long Term Debt.....			554,352,888
Equipment Obligations .....	\$57,350,736		
Mortgages and Capitalized Leaseholds .....	497,002,152		
Current Liabilities—Traffic and Car Service Balances, Accounts and Wages Payable, Interest and Dividends Matured and Unpaid, Unmatured Dividends Declared, and Other Current Liabilities.....			28,391,057
Liability for Provident Funds and Other Deferred Items.....			5,229,930
Accrued Depreciation—Equipment .....			51,120,384
Reserve for Taxes, Insurance and Operation.....			9,765,545
Surplus .....			67,672,879
Total Liabilities .....			\$927,341,218

## Road Operated and Equipment

Total Miles of Road Operated.....			5,294
Total Miles of All Track Operated.....			10,507
Locomotives .....			Steam 2,448
			Electric 11
Passenger Cars .....			1,520
Freight Cars .....			97,647
Tugs, Barges and Other Boats .....			179
Work Equipment .....			2,573

[ADVERTISEMENT]

## Seventy-second Report of the Lehigh Valley Railroad Company

PHILADELPHIA, Pa.

To the Stockholders of the Lehigh Valley Railroad Company:  
The Board of Directors submits herewith its report for the year ended December 31, 1925.

### Income

The Corporate Income for the year was as follows:

Total Operating Revenues.....	\$74,430,573.07
Total Operating Expenses.....	57,433,390.16
Net Operating Revenue.....	\$16,997,182.91
Railway Tax Accruals.....	\$3,604,181.75
Uncollectible Railway Revenues.....	17,400.52
Equipment Rents—Net.....	1,154,456.14
Joint Facility Rents—Net.....	273,835.37
	4,502,203.04
Net Railway Operating Income.....	\$12,494,979.87
Other Income .....	2,492,231.89
Total Income .....	\$14,987,211.76
Deductions from Income.....	6,940,648.17
Net Income .....	\$8,046,563.59

### Profit and Loss

Balance December 31, 1924.....	\$55,621,765.55
Transferred from Income.....	8,046,563.59
Miscellaneous Items—Net.....	161,684.91
	\$63,506,644.23
Dividends .....	4,245,749.00
Balance December 31, 1925.....	\$59,260,895.23

### Financial

During the year \$1,000,000 Collateral Trust 4 per cent. Bonds matured and were paid. Since the close of the year the final installment of this issue amounting to \$500,000 also matured and was paid.

Securities amounting to \$24,000,000, which had been under pledge as collateral, were returned to your Company's Treasury, as a result of the redemption of the \$15,000,000 Ten-Year Collateral Trust 6 per cent. Bonds of 1928.

At the close of the year your Company held in its Treasury unpledged securities amounting to \$29,280,904.32, and, in addition, the following securities of its own issue:

Collateral Trust 4% Bonds .....	\$23,000.00
General Consolidated Mortgage Bonds.....	38,071,000.00
Consolidated Real Estate Co. Bonds (assumed) .....	2,600,000.00
	\$40,694,000.00

Your Company has practically no maturities of outstanding obligations to meet for the next thirteen years, when an issue of \$8,500,000 becomes due, the refunding of which is provided for in the General Consolidated Mortgage.

Since September 30, 1903, the date of the General Consolidated Mortgage, expenditures of approximately \$62,000,000 have been made for Additions and Betterments to the property of your Company and for other capital purposes against which no new or additional securities have been issued.

The Bonds of the Lehigh Valley Railroad Company and its subsidiaries in the hands of the public, as of December 31, 1925, amounted to \$126,466,000, a reduction of \$358,500, compared with a year ago. The average interest rate is 4.61 per cent.

Your Company has no equipment trust obligations.

### Road and Equipment

Expenditures for Additions and Betterments to road and equipment during 1925, including expenditures on subsidiary properties, amounted to \$5,608,964.02.

At Bayonne, your Company's line was extended to connect with the rails of the East Jersey Railroad and Terminal Company, reaching an important industrial territory.

Two inland freight stations for receiving and delivering freight in New York City were opened, these facilities being in addition to the piers on the Hudson, East and Harlem rivers.

As a result of changes made necessary by the elimination of highway grade crossings at Perth Amboy, a new freight station was erected, local yards rearranged and freight handling facilities increased. Other improvements to facilitate the handling of freight business were made in New York City at the West 27th Street Yard, Manhattan, and the 149th Street Yard, the Bronx; and at Jersey City, Hillside, South Plainfield, Easton, Allentown, Coxton, Miners Mills, Weedsport and Williamsville.

To meet the demand for increased clearances in connection with

the trend toward larger box cars and the higher loading of boxed automobiles, etc., on flat cars, changes were made in Musconetcong tunnel. At the same time, several adjacent overhead highway bridges were raised to correspond with the new clearance requirements.

The new passenger station at Bethlehem was completed and is now in service.

Important progress was made upon the improvements under way at Easton. The new four-track viaduct was partially completed, two tracks having been placed in service. New concrete coal pockets were finished and work on a new passenger and freight station is under way.

The bridge at Phillipsburg, to which reference was made in the last report, was completed. Five other new bridges were constructed, a four-track main line bridge across the Lackawanna River at Pittston, Jct. was rebuilt, fourteen bridges were strengthened and modernized and six were eliminated.

A new laundry building was constructed and equipped and a new refrigerating plant installed for the Dining Car Department at Easton.

To provide for the handling of heavier locomotives on the eastern end of the line, a new engine house of fifteen stalls was constructed at Lehighton and the capacity of the engine house at Easton materially increased. Longer turntables were also installed at Perth Amboy, Easton and Tunkhannock. Fifteen stalls in the engine house at Coxton were also enlarged.

Orders were placed during the year for the construction of 500 steel automobile cars, 500 steel coal cars and 100 mill type cars. These cars will be delivered during the present year and paid for out of current funds.

Thirty-five 12,000-gallon capacity locomotive tenders were purchased and put in service during the year and five three-cylinder locomotives, three steel dining cars and five steel passenger coaches, orders for which were placed in 1924, were also received.

One new tug was added to the New York Harbor equipment of your railroad, making sixteen tugs in that service.

To meet the requirements of the Kaufman Act prohibiting the operation of steam locomotives in the City of New York, your Company purchased two oil-electric locomotives for switching service in the yards at West 27th Street, Manhattan, and 149th Street, the Bronx.

A study of the advantages to be gained both in service to the public and through economies in operation resulted in further investment in new motor equipment to be used on the rails. One gasoline motor car, five gasoline-electric motor cars and one trailer for the handling of passenger and baggage were purchased during the year and are now in service. On some of these motor car runs, regular way freight service is also performed.

Contracts have been made with operators of motor trucks for the handling of freight over several routes, eliminating the use of steam trains and effecting material savings. These motor trucks traveled a total distance of 41,686 miles and handled 13,087,734 pounds of freight.

Together with practically all other large railroads of the United States, your Company has been ordered by the Interstate Commerce Commission to equip two of its passenger operating divisions with a system of automatic train control, intended to protect trains against accident in instances where enginemen fail to heed the existing automatic signals. One division, between Newark and Easton, has been equipped and thirty locomotives have had the required apparatus installed. The work of equipping the balance of the engines operating in this territory is progressing steadily. Plans are now under consideration with regard to the second passenger division. This system of train control is in addition to the protection already afforded by automatic signals.

Track maintenance facilities were increased by the purchase of eighteen motor cars and nine trailers as well as by further purchases of pneumatic tie tampers, concrete mixers and other power operated machines.

An interlocking plant and signals were installed on the National Docks Branch at Jersey City.

### General Remarks

For the first eight months of 1925 normal conditions prevailed upon your railroad. On September 1st, however, the mining of anthracite was suspended following the termination of wage and working agreements between the miners' organization and the operators, resulting in the loss of this traffic for the four remaining months of the year. The revenues of your Company from the handling of this commodity were about \$5,260,000 less than in 1924. This enormous reduction in revenues could not be offset entirely by the receipts from other traffic, but it is worthy of note that general merchandise business increased 6.4% and passenger revenues increased 4.5% as compared with the previous twelve months. Had

anthracite operations continued normally throughout the year the gross receipts from transportation for 1925 would easily have exceeded those of any previous year.

A new grain elevator of 1,200,000 bushels capacity was placed in service at Buffalo on property purchased from your Company in the Tifft Farm territory, directly on Lake Erie, and already the owners have let contracts for increasing its capacity 75%. Other industries are giving evidence of increasing interest in the opportunities offered at the Tifft Farm development, enjoying, as it does, remarkable rail and water advantages, and important additions to the freight traffic of your Company will be made through the location of new plants at that point.

Over ninety-six miles of 136-pound rail, the Company's standard and the heaviest rail in general use on any railroad, were laid during the year. These new rails are 39 feet long, as against a former length of 33 feet. The Lehigh Valley was the first to lay this longer rail, having begun its use in 1924. The main line is now 74% equipped with 136-pound rail, while 73% of all the ties in your Company's tracks are creosoted, 322,000 creosoted ties having been installed during 1925.

A total of 107 industries, ninety of them with direct track con-

nctions, were located along the Lehigh Valley during the year, 6.8 miles of new track having been constructed to serve these and other industries.

Taxes for the year amounted to \$3,991,167.31, an increase of \$334,606.57 compared with 1924. It is noteworthy, in this connection, that the taxes of the railways generally, in the last ten years, have increased 170%, and more in proportion than any other form of their income or outgo.

Consideration is being given, in accordance with a Federal decree, to plans for the sale of the capital stock of Coxe Bros. & Co., Inc., all the stock of which concern is owned by your Company.

Since the close of the year, William C. Sproul was elected a member of the Board of Directors, succeeding Samuel T. Bodine, who resigned, after ten years' service, because of the press of other duties.

Your Company's employees and officers worked faithfully and efficiently during the year and grateful acknowledgment is made of their loyal service.

Respectfully,

E. E. LOOMIS,  
President.

## General Remarks to Owners of Railroad Securities

Excellent business conditions and a normal situation in the general transportation field have given the owners of railroad securities ample reason for regarding the future with confidence. The character of service the carriers have rendered in recent years has won high praise from their patrons and brought about a substantial change in the buying habits of the nation. Unfortunately, this state of affairs has given many the impression that the railroads are once more in a highly prosperous condition. Demands have been made for reductions in freight rates for the benefit of this or that industry or territory, and many classes of railroad employees seemingly have regarded the time as opportune to seek advances in wages. As a matter of fact, there is nothing in the situation to justify the thought that the railroads can meet large reductions in their income—either through lower revenues or greater operating expenses. They have, by no means, recovered from the losses sustained in recent periods of depression nor from the material impairment of their credit through the repressive regulation and restriction with which they had to contend during the period before the Transportation Act of 1920 was enacted.

Since the passage of this law the railroads have never in any year earned the 5 3/4% which the Interstate Commerce Commission has fixed as a fair return upon their investment. In 1925 they made the best showing, but even then their earnings as a whole represented only 4.83% upon the value of their properties. On the figures set up by the Commission itself as representing its tentative valuation of the properties used for transportation purposes, the railroads' earnings were barely 5 1/2%. This tentative valuation has been challenged by the carriers as by no means representing the true full value of their properties.

Regardless of the method of measurement the present return is far from adequate and offers no opportunity for the carriers to build up a credit which will enable them to finance necessary improvements to their properties, and credit is a prime requisite, if they are to be equipped to meet the constantly growing demands of American business.

What, it may be asked, can the owners of railroad securities do under these conditions to protect their investment? They can and should manifest a continuing interest in all matters affecting the carriers, particularly with regard to legislation calculated to reduce their revenues. As has been pointed out in previous reports, there

is a disposition among many members of Congress to put the highly technical matter of rate making into politics and to enact laws which will provide lower transportation costs for some group or territory, almost always at the expense of the railroads and the service they are able to give. Congress has vested the Interstate Commerce Commission with adequate powers over rates. This tribunal is fully equipped to study each particular case without regard to political or territorial claims, and it should be permitted to exercise its jurisdiction without interference or pressure. If the owners of railroad securities will use their best efforts to prevent political invasion of the railroad rate question, they will contribute a service of value to themselves and to the Nation's commerce.

It would seem as if this were a proper attitude likewise in regard to consolidation of railroads, for which there has been considerable agitation in recent years. It is a remarkable feature of this question that the demand for the unification of the carriers has not come from the great body of the shipping public which is the principal user of transportation service. Many students of the problem are convinced that wholesale and arbitrary consolidation of railroads will not prove the unmixed blessing promised by the theorists on the subject, and that the building up of unwieldy systems, too large for adequate administration and supervision, is certain to bring serious impairment of the efficient service record American railroads have made in recent years.

Unquestionably, there are advantages to be gained by permitting the consolidation of railroads, subject, of course, to the approval of the Interstate Commerce Commission, where unification can be made along normal lines and where it will bring about economies without impairing in any way the character of service given the public. This last, however, should be the acid test and all other advantages urged in favor of mergers should be made subservient to the results to be obtained from the standpoint of the shipping and traveling public.

Here, again, the public and particularly the owners of railroad securities may exercise a constructive influence through opposing any attempt at compulsory consolidation immediately or at any future time.

E. E. LOOMIS,  
President.

[ADVERTISEMENT]

(Continued from page 612)

or 12.50 per cent on the \$499,173,400 stock, compared with \$3.82 a share or 7.64 per cent in 1924.

**ST. LOUIS-SAN FRANCISCO.—Equipment-Trust Certificates.**—The Interstate Commerce Commission has approved the issuance of \$7,800,000 4 1/2 per cent equipment-trust certificates, series BB, to be sold to Speyer & Co. and J. & W. Seligman & Co. at 97. Certificates mature in equal annual amounts on February 15 in each of the years 1927 to 1941. The equipment includes 25 locomotives, 4,000 freight cars and 14 passenger cars having a total approximate cost of \$10,407,317.

**SOUTHERN.—Equipment Trust.**—This company has applied to the Interstate Commerce Commission for authority for an issue of \$6,900,000 of 4 1/2 per cent equipment trust certificates, to be sold to Drexel & Co., of Philadelphia at 97 1/8.

**WELLINGTON & POWELLSVILLE.**—W. C. Rawles has stated that he will lodge a protest against the recent auction sale before Judge

I. M. Meekins in the District Federal Court at Raleigh. The highest bidder at the sale was William C. Everett as reported in the *Railway Age* of February 27.

### Dividends Declared

**Delaware & Hudson.**—2 1/4 per cent, quarterly, payable March 20 to holders of record March 5.  
**Florida, Johnstown & Gloversville.**—Preferred 1 1/2 per cent, quarterly, payable March 15 to holders of record March 10.  
**Reading Company.**—Second preferred, 1 per cent, quarterly, payable April 5 to holders of record March 22.

### Average Price of Stocks and Bonds

	Mar. 2	Last Week	Last Year
Average price of 20 representative railway stocks .....	89.33	93.24	84.23
Average price of 20 representative railway bonds .....	94.70	95.50	90.86

## Railway Officers

### Executive

**C. T. Collett**, general agent, passenger department, of the Southern Pacific, with headquarters at Chicago, has been promoted to assistant to the vice-president, with the same headquarters, a newly created position.

**A. S. Ingalls**, general manager of the New York Central Lines west of Buffalo, with headquarters at Cleveland, Ohio, has been promoted to assistant vice-president, with the same headquarters, a newly created position.

**George E. Evans**, who has been elected executive vice-president of the Louisville & Nashville, with headquarters at Louisville, Ky., was born on May 2, 1856, at Cambridge, Ohio, and entered railway service in 1871 as a telegraph operator on the Baltimore & Ohio. He entered the service of the Louisville & Nashville two years later as a telegraph operator and was later promoted to train dispatcher. In 1880 he was promoted to chief operator and train dispatcher on the Louisville division, and in 1882 was promoted to master of trains on the same division. Mr. Evans was promoted to superintendent of the Louisville division in January, 1885, and in May of the following year was promoted to superintendent of transportation. He was promoted to general manager in July, 1900, and in January, 1905, was elected vice-president in charge of operation. Mr. Evans held that position continuously up to the time of his recent election as executive vice-president.



G. E. Evans

### Financial, Legal and Accounting

**A. L. Graner** has been elected vice-president and treasurer of the Akron, Canton & Youngstown, and the Northern Ohio, with jurisdiction over the accounting and treasury departments.

### Operating

**H. D. Mudgett**, trainmaster on the Montana division of the Northern Pacific, has been transferred to the Rocky Mountain division, succeeding **J. P. Donahue**, deceased. **D. S. Colby** has been appointed trainmaster on the Montana division, in place of Mr. Mudgett.

**F. D. Beale** has been appointed superintendent of the Richmond division of the Chesapeake & Ohio, with headquarters at Richmond, Va., succeeding **M. C. Selden**, deceased. **H. M. Eddins** has been appointed trainmaster of the Allegheny subdivision, with headquarters at Clifton Forge, Va., succeeding Mr. Beale, and **E. D. Glenn** has been appointed trainmaster of the James river sub-division, also with headquarters at Clifton Forge, Va., succeeding Mr. Eddins, transferred. Owing to the transfer of Mr. Glenn, formerly trainmaster at Strathmore, Va., this position will be temporarily vacated.

**D. R. MacBain**, assistant general manager of the New York Central Lines west of Buffalo, with headquarters at Cleveland, Ohio, has been promoted to general manager succeeding **A. S. Ingalls**, promoted. **W. F. Schaff**, general superintendent, with

headquarters at Chicago, has been promoted to assistant general manager, with headquarters at Cleveland, succeeding Mr. MacBain. **W. H. Sullivan**, division superintendent, with headquarters at Youngstown, Ohio, has been promoted to general superintendent at Chicago, succeeding Mr. Schaff. **J. R. Todd**, division superintendent, with headquarters at Gibson, Ind., has been transferred to Youngstown in place of Mr. Sullivan. **W. P. Lamb**, division superintendent of the New York Central lines west of Buffalo, with headquarters at Elkhart, Ind., has been transferred to Gibson, succeeding Mr. Todd. **Frederick Grundler**, assistant superintendent of the Cleveland division, with headquarters at Cleveland, Ohio, has been promoted to superintendent of the Michigan division in place of Mr. Lamb. **G. H. Jedele** has been appointed assistant superintendent of the Cleveland division, succeeding Mr. Grundler.

### Mechanical

**W. A. Kelly**, master mechanic of the Galesburg division of the Chicago, Burlington & Quincy, with headquarters at Galesburg, Ill., has been transferred to the Ottumwa division, with headquarters at Ottumwa, Ia., succeeding **H. C. Turner**, who has been appointed assistant master mechanic of the Ottumwa division, with headquarters at Burlington, Ia. **J. S. Ford**, assistant master mechanic of the Galesburg division, with headquarters at Galesburg, Ill., has been promoted to master mechanic of the Galesburg division in place of Mr. Kelly. **E. J. Cyr** has been appointed assistant master mechanic of the Galesburg division succeeding Mr. Ford.

### Obituary

**John S. Donaldson**, assistant comptroller of the Pennsylvania, died at his home in Philadelphia, on February 28, following an illness of ten days.

**M. C. Selden**, superintendent of the Richmond division of the Chesapeake & Ohio, died on February 21, in a Pittsburgh, Pa., hospital, after a brief illness.

**W. J. Tollerton**, general superintendent of motive power of the Chicago, Rock Island & Pacific, with headquarters at Chicago, died in that city on March 3, of intestinal influenza. Mr. Tollerton was born in 1870 at St. Paul, Minn., and was educated in the public and high schools. He entered railway service as a machinist's apprentice on the St. Paul & Duluth, now a part of the Northern Pacific, and subsequently became a fireman on the Chicago, St. Paul, Minneapolis & Omaha. From 1890 to 1896 he was a foreman and afterwards general foreman on the Union Pacific, and from the latter date until 1903 was master mechanic of the Utah division of the Oregon Short Line. From 1903 to July, 1906, he was master mechanic on the Idaho, Utah and Montana divisions of the same road at Pocatello, Idaho. He then became superintendent of motive power of the Chicago, Rock Island & Pacific, in charge of the lines west of the Mississippi river, with headquarters at Topeka, Kans., where he remained until April, 1907, at which time he became assistant general superintendent of motive power of the Rock Island Lines, with headquarters at Chicago, Ill. He became mechanical superintendent in May, 1912, and general mechanical superintendent on January 1, 1913. In May, 1923, Mr. Tollerton's title was changed from general mechanical superintendent to general superintendent of motive power.



W. J. Tollerton